DOCUMENT RESUME

ED 077 786 SO 005 633

TITLE	Educational Policy and Planning. Germany.
INSTITUTION	Organisation for Economic Cooperation and Development, Paris (France). Directorate for Scientific Affairs.
PUB DATE	72
NOTE	299p.
AVAILABLE FROM	Organisation for Economic Co-operation and Development, Director of Information, O.E.C.D., 2, rue Andre-Pascal, 75775 PARIS CEDEX 16, France ($6.75)
EDRS PRICE	MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	Administrative Organization; *Comparative Education; Developed Nations; Educational Change; *Educational Development; *Educational Planning; *Educational Policy; Educational Programs; Educational Research; Educational Resources; *Educational Status Comparison; Educational Trends; Summative Evaluation; Surveys; Tables (Data)
IDENTIFIERS	*Germany

ABSTRACT

This background report is an examination of the development of the educational system in Germany. Part I is an explanation of the basic federative structure of the Federal Republic and the resulting competencies and responsibilities for the educational system. State regulations provide the primary point of departure in the description of the educational system in Part II, because in the Federal Republic the schools and universities are established and maintained for the greater part by state and local authorities. Future perspectives in educational development are outlined in Part III, and a quantitative analysis in statistical form is presented in the final section of the report. (Author/SHM)

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EDUCATIONAL POLICY AND PLANNING

GERMANY

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DIRECTORATE FOR SCIENTIFIC AFFAIRS

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

PARIS 1972

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GERMANY

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This document, prepared jointly by the Federal Government and the Länder Ministries of Education and Cultural Affairs of Germany, served as a background report for the examination of educational policy and planning of Germany (1), carried as out as part of the programme of the Education Committee of OECD.

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1) Reviews of National Policies for Education : Germany, OECD, 1972.

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INTRODUCTION

The background report prepared for the O.E.C.D. Examination of the Educational Policy in Germany has been drawn up jointly by the Federal Government and the Länder Ministries of Education and Cultural Affairs.

In order to facilitate a better understanding of the following description of the educational system in Germany, and its development, an attempt is first of all made in Part I to explain the basic federative structure of the Federal Republic and the resulting competencies and responsibilities for the educational system.

State regulations provide the primary point of departure in the description of the educational system in Part II, because in the Federal Republic the schools and universities are established and maintained for the greater part by the state and local authorities. A considerable number of private sponsors is to be found only in pre-school education, in sections of the vocational education system (particularly where this is provided in industrial firms) and in further education, to a lesser degree also in the school system itself, especially in the case of Gymnasien. This will be gone into in more detail in the relevant sections of the report.

Because of the peculiarities of the educational system, but also because of the special structure of the state of Germany, a relatively detailed description has been provided of the existing school and university system as well as of vocational education. Here, it was found necessary to explain how, on the one hand, an adjustment has been made to the demands of the modern industrial society in the 20 years since the Federal Republic was founded, and on the other hand, how new objectives have been developed based on latest scientific findings gained in many respects from international co-operation. To a great degree, these new objectives have meant the development of new institutional forms.

The description of previous developments is contained in the main in Part II, while Part III deals with future perspectives. Quantitative analyses in the form of statistics, contained primarily in Part IV are intended to contribute towards a clearer description.

PART ONE

Educational Policy and Educational Planning in the Federative System of Germany

Introduction

Responsibility for educational policy and educational planning is determined in Germany by the federative structure of the state. Some introductory remarks and historical references are necessary to give a better understanding of this constitutional and political situation.

The Federal Republic of Germany was constituted through the Basic Law of 23rd May, 1949, as a "democratic and social Federal state"(1). This meant that at the founding of the Federal Republic a clear renunciation was expressed both of the idea of a rigid central state and of a mere federation of states composed of the various Länder which existed then in the later Federal area. Rather, the Basic Law adopted a constitutional tradition that was already characteristic of the constitution of the Deutsches Reich 1871-1918 and 1919-1933 (Weimar Republic).

The Federal state form with which the Reich constitution of 1871 replaced the previously very much looser forms of state co-existence among the German territories permitted really far-reaching autonomy especially in cultural affairs and also in educational and training questions in the Member states.

In the Weimar constitution of 1919, the Reich was equipped with greater competencies in the educational sector, but little use was made of these up to the end of the Weimar Republic in 1933.

The Basic Law, the Federal Republic's constitution of 1949 - not least because of the centralist tendencies of the National Socialist era - put greater emphasis in general on the federative structure. It led, however, at the same time through the direct legal validity of the basic rights and the overall structure of the constitution to a more marked partnership between the Federation and the Länder.

Distribution of Competencies in Federation and Länder

According to the decision taken by the founders of the Basic Law, the Federation is attributed only certain tasks determined in number and scope by the constitution, while the

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(1) Article 20 of the Basic Law (G.G.) see addenda (annex 1 and 1a).

Länder have a kind of general competence for the handling of state tasks(1). This basic limitation of Federal competence does not mean, however, in reality that the main weight of state authority has been shifted to the Länder. According to the Basic Law's distribution of competencies, the tasks that are particularly important for the general development of state and society are mainly the responsibility of the Federation. For example, the competencies for foreign relations and defence are exclusively in the hands of the Federation. Financial, general legal, economic, labour and social policy are to a very large extent the responsibility of the Federation. The range and importance of state activity in comparison to the Länder are also expressed in the volume of the budgets. For example, in the 1969 budget year, the Federal budget totalled DM. 83,000 million, while the budgets of the eleven Länder in the same year totalled jointly just about DM. 57,000 million. The expenditure by the local authorities(2) totalled DM. 40,000 million in the same year. Almost one half of all public expenditure in 1969 was attributed to the Federation(3).

The educational system is one of the few important sectors which the Basic Law of 1949 left almost exclusively to the Länder. In the educational sector, the Federation was given authority within the framework of competitive legislative competence(1) for the promotion of scientific research(2) and extra-mural vocational education(3). It was only 20 years later, in 1969, that Federal competence in the university and educational sectors was extended (see below). Consequently, the Länder had the right and opportunity to design and develop school and university systems under their own responsibility according to their own traditions and ideas. However, the Länder had the obligation to remain "loyal to the Federation", i.e. they were obliged to observe a conduct suited to the Federal state and to hold a certain respect for the developments in the remaining Federal area. In this connection, an important factor is that the Basic Law concedes the basic rights of freedom of movement, the free choice of occupation and the free choice of one's place of education and training. In all their measures, the Länder are also obliged to safeguard these basic rights.

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(1) "The exercise of governmental powers and the discharge of governmental functions shall be incumbent on the Länder insofar as this Basic Law does not otherwise prescribe or permit." (Art. 30 GG)

"The Länder shall have the power to legislate insofar as this Basic Law does not confer legislative powers on the Federation." (Art. 70, Para. 1 GG)

(2) The local authorities and organisations play a special role in the educational system as sponsors of schools and institutes in adult education (further education).

(3) The Federal State element of the constitution of Germany - not least in public and civic consciousness - is underlined also by bodies such as the Federal Post Office and the Federal Railways, and also by the Federal autobahns and highways. To the same effect, the citizen of the state does not pay separate taxes to the Federation and the Länder, but only to one State (as well as at present to the local authorities), and the Länder implement Federal Law and for the citizen represent the administrative power for the State as a whole.

The Länder have acknowledged as their task the maintenance of a minimum degree of co-ordination and uniformity in educational policy. They have set up, as an instrument of voluntary co-ordination among themselves and of mutual exchange of information, the "Permanent Conference of the Ministers of

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(1) The Federal legislative competence is divided into an absolute and a competitive legislative competence (which exists for a number of sectors only as competence for skeletal legislation). In the sector of competitive legislation, the Länder are empowered to legislate insofar as the Federation makes no use of its legislative right. (Art. 72, Para. 1 GG). In this sector, the Federation has legislative power, as far as there is a need for Federal Law rulings, because:

(a) a matter cannot be effectively regulated by the legislation of individual Länder, or

(b) the regulation of a matter by a Land law might prejudice the interests of other Länder or of the entire community, or

(c) the maintenance of legal or economic unity, especially the maintenance of uniformity of living conditions beyond the territory of a Land, necessitates such a regulation. (Art. 72, Para. 2 GG)

(2) Article 74, No. 13 GG.

(3) This competence arises in particular from the responsibility of the Federation for labour law and economic law (Art. 74, Nos. 11 and 12 GG). In practice this involves primarily the factory side of the so-called dual vocational education system, in which school and factory training take place side by side and at the same time. The Federation can have an indirect influence in certain vocational sectors by means of its responsibility for trade regulations, e.g. in medical and curative vocations according to the terms of Art. 74, No. 19 GG.

Education and Cultural Affairs in Germany" (in short "Kultusministerkonferenz"), which has concluded far more than 300 skeleton agreements since it was founded in 1948(1).

In questions of major importance, the Länder also apply state treaties or state agreements among themselves. For example in 1955 an "Agreement towards Uniformity in the School System" (so-called "Düsseldorf Agreement") was concluded among the Länder. This agreement was superseded in 1964 by the presently valid "Hamburg Agreement" which was amended in 1968(2). The application of these agreements, as far as they affected Länder laws, was put into the hands of the individual Länder parliaments, and did not become valid everywhere at the same time. However, the agreements have contributed to Germany's educational system showing more uniform features than in nearly all earlier periods of German history.

In fact, the development or preservation of uniform structures in the Federal Republic's educational system has to a great extent been supported by the traditional uniformity of German universities. This uniformity was also maintained at least in the first two decades of the Federal Republic's existence without the security given by Länder agreements. It also transferred certain uniformity to the school system on the one hand through Gymnasium teacher training which took place at universities and on the other hand through the Abitur principle, i.e. qualification for university study by the Abitur(3).

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(1) The Kultusministerkonferenz is a voluntary working group of the Länder Ministers competent for the cultural sector (including education, science and research). According to the terms of their brief, the Kultusministerkonferenz deals with "affairs of cultural policy of supra-regional importance with the objective of jointly forming public opinion and of representing common matters of interest". Practical decisions in the Kultusministerkonferenz can only be taken by a unanimous vote (with the possibility of abstension). These resolutions are in the form of recommendations to the Länder, whose constitutional and administrative rights and competencies remain untouched. Resolutions only become binding Länder law when they are translated by the individual Länder into their own laws or decrees.

(2) See also under Part II and addenda (annex 2 and 2a).

(3) The uniform access to university has been and will be secured by the Länder through mutual recognition of qualifying examinations. (Abitur)

In 1957, following a first phase of university redevelopment, the Federation and the Länder began to co-operate more closely in scientific and university policy. On the basis of an agreement(1) between the Federal Government and the eleven Länder governments they founded the Science Council, a joint advisory committee consisting of numerous representatives of scientific and academic life.

One expression of this closer co-operation was the rapid and rising co-financing of the universities on the part of the Federation which finally led to the formal agreements between the Federation and the Länder(1) in the sectors of research promotion, university expansion and the assistance given to students in the form of grants and loans.

In 1965, a further Federation-Länder agreement set up the German Educational Council. It was established as an advisory committee for the entire educational system, with the exception of the university sector, for which the Science Council continued to remain responsible. The German Educational Council also replaced the German Committee for Education(2).

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1) The agreements were concluded between the Federal Government and the Länder governments. They were administrative agreements between the executives without having the quality of state treaties ratified by parliaments. These agreements were in dispute in constitutional law, because they were not foreseen in the Basic Law. Through the constitutional amendments of 12th May, 1969 they were replaced within the framework of the newly established institution of "community tasks" in part by law, and in part they were anchored in the constitution, because there was now the possibility of Federation-Länder agreements in certain sectors provided for specifically by the Basic Law. In detail the following agreements were concluded:

   a) Administrative Agreement for the Promotion of Science and Research of 4th June, 1964 and of 8th February, 1968 (extension agreement),

   b) Administrative Agreement for the Promotion of Special Research Sectors of 11th June, 1969,

   c) Agreement on the Establishment of a Science Council of 5th July, 1957 (with extension agreement),

   d) Agreement on the Establishment of a German Educational Council of 15th July, 1965.

2) The German Committee for the Educational System was called into being in 1953 as the expert advisory committee for the development of educational policy reform ideas by the Federal President on the recommendation of the Federal Minister of the Interior and the Kultusministerkonferenz. Having elaborated numerous recommendations and reports, the Committee terminated its work in 1965. (See also e. in text under II).

In particular the desire for a greater rationalisation in university planning, for a better guarantee for uniformity in the university system, which no longer appeared to be adequately safeguarded with the increased speed of university reforms in the individual Länder, as well as for the generally increased participation by the Federation in educational planning, led in 1965 to an expansion of Federation competence in educational policy within the scope of the finance reform that was approved at the same time.

Through amendments to the Basic Law on 12th May, 1969, the Federation received, in addition to previous relevant competencies, a competitive legislative competence for the settlement of educational assistance(1) and competence for skeletal legislation for the "general principles of the university system"(2) In addition, the same amendments provided for the institution of so-called "Gemeinschaftsaufgaben" (joint tasks)(3) by Federation and Länder, according to which the Federation participated with the Länder among other things in the expansion and extension of universities, including university clinics through participation in expenditure and joint skeleton planning. Apart from this, the amendments to the Basic Law provided the Federation and Länder with the opportunity of co-operating on the basis of agreements in educational planning and in the promotion of establishments and projects in scientific research considered to be of supra-regional importance(4). The institution of joint expenditure represented at the same time an initial breakthrough in the previously valid constitutional principle of a division of tasks and expenditure between the Federation and the Länder.

Co-operation and Freedom of Decision in the Present System (Instruments of Joint Educational Planning)

The process of decision making and co-operation in educational policy and educational planning can be briefly described at present as follows.

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1) Article 74, No. 13 GG, new version.

2) Art. 75, Para. 1, No. 1a GG. The Federal competence for skeletal legislation exists under the same precondition as for concurrent legislation (see note 3, Page 3).

3) The term "Gemeinschaftsaufgaben" (joint tasks) is defined as follows in the Basic Law: "The Federation participates (in the following sectors) with the Länder in the fulfilment of tasks of the Länder, if these tasks are of importance for the society as a whole and where the participation of the Federation is necessary to improve living conditions..." The sectors in which there are joint tasks are numbered in the Basic Law (Art. 91 a GG).

4) Article 91 b GG.

According to the terms of the parliamentary democracy system in the Federal Republic, the decision in basic questions of educational policy is in the hands of the governments and parliaments of the State and the Länder, which possess freedom of decision within the framework of their competencies (see above). The discussion on the question of the participation by the parliaments in so-called community expenditure whereby plans drawn up by executives of the Federation and the Länder have a strongly binding nature in practice though not legally, has not yet finished.

The Kultusministerkonferenz (see above) continues to act as a co-ordinating body between the executives of the Länder, especially where it involves the legislative materials and administrative tasks falling within the competence of the Länder. Here the Kultusministerkonferenz uses in particular its committees (school committee, university committee, committee for the arts and adult education) and numerous working groups, and in addition ad hoc committees and commissions from case to case. In questions where educational policy is connected with financial policy, the Kultusministerkonferenz co-operates with the Conference of Finance Ministers in the form of a joint working group. Educational policy questions of special political importance are given final discussion by the Conference of Ministers-President after preparation by the Kultusministerkonferenz, in particular when the form of state agreements appears necessary for the agreements drawn up.

At government level, the following instruments sponsored both by the Federation and the Länder have existed since 1970 for the process of planning and counselling before parliamentary decisions are taken.

1. For joint tasks in extending and expanding universities, the Federal Law on the Promotion of University Facilities of 1st September, 1969 provided for a planning committee comprising equally of representatives of the Federal Government and the Länder governments. The committee draws up binding skeleton plans for university extensions with a majority of three-quarters of the votes for the participating governments(1).

2. For general educational planning, a joint commission for educational planning was set up on the basis of an agreement of 25th June, 1970 between the Federal Government and the Länder governments. The task of

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1) See text of the Law on the Promotion of University Facilities in addenda (annex 3).

> this commission is to prepare a joint long-term skeleton plan for a co-ordinated development of the entire educational system and medium-term phased plans for the realisation of educational policy objectives within the skeleton plan, to make recommendations for the co-ordination of mature part plans of the Federation and the Länder, to assess the possible financial requirement for their realisation, and to work out proposals for financing and the provision of the necessary funds by the Federation and the Länder(1). The Federal Government and the eleven Länder governments are together represented in the commission with an equal number of votes (each has eleven). According to the terms of the agreement of 25th June, 1970, the commission can approve decisions with a three-quarter majority. The recommendations of the commission as well as the (possible) minority votes of outvoted members of the commission are submitted to the heads of governments (of the Federation and the eleven Länder) for discussion and approval. Any decision requires the approval of at least nine heads of government (from a total of twelve)and is binding only on those who have given their approval. The commission began work on 29th July, 1970 and set up committees for certain partial sectors of its field of competence.

The Science Council and the German Educational Committee are advisory groups to the state bodies. They were called into being through the Federation-Länder agreements of 1957 and 1965.

The Science Council examines plans(2) for university extension and passes on recommendations on questions of university and scientific policy. The Science Council is comprised of a scientific and administrative commission. Its members are scientists,appointed on the proposal of the big scientific organisations,as well as recognised public figures and representatives of the Federal Government and the Länder governments(3).

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1) Agreement text, see addenda (annex 4).

2) Up to 1969, the Science Council provided only reports on the application of Federation funds for university construction. Through the Law on the Promotion of University Facilities (see note 14), the Science Council was entrusted to draw up recommendations for the joint skeletal plans of the Federation and the Länder for university extension.

3) Text of agreement on Science Council, see addenda (annex 5).

The German Educational Council consists of an education commission, to which belong experts and representatives of important social groups(1) and a government commission to which the Federal Government, the Länder government and the local authorities send their representatives. The government commission is chaired by the President of the Kultusministerkonferenz. The task of the educational commission is to draw up requirement and development plans for the German educational system, to make proposals for the structure of the educational system, to assess the financial requirements, and make recommendations for long-term planning at the various stages of the educational system. The educational commission puts forward its plans, proposals and recommendations independently, although only after consultation with the government commission(2).

The educational commission and the Science Council have set up a co-ordinating committee for consultation on questions of common interest(3).

It cannot yet be said for sure how the function of these two consultative committees will change as a result of the newly created planning instruments at government level.

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1) This composition of the Educational Commission of scientists and representatives of important social groups has meant that the educational commission has made effective a relatively broad range of positions and opinions in its work. The educational commission has also tried, with its recommendations, and especially with the structural plan for the educational system submitted in 1970, to make proposals which represent an acceptable compromise for the broad political and social forces.

2) Text of the agreement on the German Educational Council, see addenda (annex 6 and 6a).

3) This co-ordinating committee is prescribed in the agreement on the establishment of a German Educational Council.

PART TWO

Description of the Present System

1. Introduction

Education in the Federal Republic is neither exclusively a private nor a public affair. Rather in this sector, the rights and initiatives of the individual, of the parents or the family, the churches, industry and social institutions in their various forms take an equal place and are even superior at present to the tasks and activities of the State and local authorities, and supplement each other to a large degree.

According to the terms of Germany's Basic Law:

"The care and upbringing of the children are the natural right of the parents and a duty primarily incumbent on them".

The State community watches over their "actuation" however, as determined by the Basic Law in an additional clause.

Parallel to this ruling, the Federal Republic's constitution gives a basic guarantee of the right to set up private schools, with the obvious restriction that private schools require the assent of the State as a substitute for public schools and that they are subject to the laws of the Land. On the other hand, the constitution places the school system as a whole under the aegis of the State.

The strong role of the State in the educational system is also expressed in the fact that the State and the public bodies have a large share in sponsoring educational institutions (see i.e. below). The fact that the schools providing general education were previously set up for the most part as half-day schools limits of course the public education sector. In the vocational education sector, the State-public sector (school education) supplements the private sector (internal industrial training) in the so-called dual system. In both sectors, there is however the tendency towards expanding the public sector: in general education through increasing the currently very small number of day-schools, and in vocational education through expanding the school education part of the training.

The school system in the Länder of Germany is determined in structure and content by the rulings of the Basic Law (Art.7), the Länder constitutions and the legislation based on these in each individual Land.

The school system is broadly uniform, but reveals differences from Land to Land. These differences in the meanwhile are steadily losing their importance with constant treaties and agreements between the Länder and also through practical imperatives faced by the individual Land in a Federal state.

Obligatory schooling in the Länder of the Federal Republic totals 12 years, of which nine are full-time schooling.

Sketched with broad brush strokes, the present school system includes a common Grundschule for all children, extending from the 1st to the 4th or 6th grade apart from the pre-school educational institutions currently being developed.

The general-education secondary schools are a follow-up to the common Grundschule: the Hauptschule from the 5th to 9th grade, the Realschule from the 5th to 10th grade, and the Gymnasium from the 5th to 13th grade. In addition, in Hesse and Berlin, there is also the comprehensive school from the 10th to 13th grade.

Each of these secondary schools provides a definite final educational certificate.

Apart from the secondary schools providing a general education there are various secondary schools from the 10th grade of a vocational education character. Every young person after the 9th full school year - if he does not continue his education at a school providing general education - must attend such schools having vocational education character, at least in part-time form and in this case at least for the duration of two years, and in the case of attendance at a full-time school for the duration of two years.

Depending on the choice of educational course, the secondary schools in the general education and vocational education sectors open the way after 12 school years to the Fachhochschulen and after 13 years to the universities and university institutions of equal rank.

For non-school vocational education, the vocational education law of 14th August, 1969 (BGB.1. I S 1112) created a comprehensive legal basis uniform throughout the State. This applies in particular to vocational education in industrial firms, taking place in an at present 3-3½ year educational course in state recognised vocations for which training is necessary in firms in industry, commerce, handicrafts, in agricultural concerns and in training centres in other sectors with simultaneous compulsory attendance at a vocational school working as a part-time school. Apart from this, the vocational education law also contains rulings for further vocational education, retraining and correspondence courses in vocational education.

2. General Fundamentals of the Educational System and the Extra-Mural Educational System

2.1 Compulsory Schooling

All children and young people who are resident in one of the Länder of Germany are obliged to attend a full-time school providing general education for a period of at least nine years. According to school laws, this ruling also applies in the Länder for foreigners and stateless persons.

According to the terms of the Hamburg Agreement, an extension of schooling to a 10th grade is also permissible.

The introduction of the 9th grade established an important precondition for the reform of the Volksschule, i.e. the transformation of the upper level of the Volksschule from an elementary school type to a secondary school, which is now called "Hauptschule".

Apart from compulsory full-time schooling, there is also an obligation to attend a part-time school for vocational education and for the period of at least two years or for the duration of the vocational education.

Compulsory education begins for all children at the end of their sixth year of life. Usually it is completed after 12 years at school, i.e. at the age of 18, when in practice, part-time schooling is concluded. In the majority of Länder, however, this kind of compulsory education often continues into the 21st year of life.

2.2 School entrance age

All children who have completed their 6th year of life by 30th June of each year are obliged to go to school on 1st August of the same year at the start of the new school year.

On application by the parents, children can also start school who are on the threshold of school age, i.e. who complete their sixth year of life before 31st December of the year in which the new school year begins.

Children of compulsory school age, but who are not mature enough for school, can be set back first of all for one year where this is necessary and also for a further year by the school authorities. Such children are given intensive promotion in so-called Schulkindergärten or Vorklassen. Attendance at these institutions is, however, voluntary as a rule (see also under 3.1.3).

2.3 Structure of the School System and Uniform Designations

The lower level of schooling common for all children in all the Länder is called the Grundschule.

The schools leading on from the Grundschule are termed the Hauttschule (completion after the 9th grade), the Realschule (completion after the 10th grade) or the Gymnasium (completion after the 13th grade).

A secondary school starting with the 10th grade leading to the 12th grade and to the so-called Fachhochschulreife is designated Fachoberschule.

Schools for children and young people with physical, psychological and mental handicaps are termed Sonderschulen.

In addition, there are uniform designations for classes in the 5th and 6th grades in which children are promoted in a special manner and are prepared for attendance at a secondary school suited to their abilities. These institutions are called Förderstufen or Beobachtungsstufen or likewise Eingangsstufen or Erprobungsstufen.

The uniformity of the terminology accords to a great extent with the structure and content of the school forms and school types involved.

In vocational education, uniform differentiation made in the Länder of the Federal Republic between the Berufsschule, a part-time vocational school for young people obliged to attend vocational training; the Berufsfachschule, a school providing preparation for a job or for vocational education and at the same time promoting general education; the Berufsaufbauschule, which provides general and subject-oriented education going beyond the objectives of the Berufsschule; the Fachschule, which provides a more specialised education and advanced education and which as a rule is attended only after an adequate practical training; and the Akademie or Höhere Fachschule, for whose attendance the leaving certificate of Realschule or equivalent (Fachschulreife) is necessary alongside a completed vocational training or two year's practical work and which with daily instruction over a period of at least five half-years leads to an advanced vocational qualification.

2.4 The Structure of Extra-Mural Vocational Education

For the non-school sector, the Vocational Education Law for the Federal Republic of Germany has defined possible educational courses under the term Berufsbildung.

Vocational training imparts a broadly based basic vocational education and the necessary vocational skills and knowledge necessary for the practice of qualified vocational work within the framework of a systematic educational course. In addition, it has to make possible the acquisition of essential vocational experience.

Advanced vocational training should make it possible to acquire and expand vocational knowledge and skills, to adjust to technological development or to make progress in one's work.

Vocational re-training must provide the abilities to take on another job.

The core of the Vocational Education Law is the regulations on vocational education. This takes place within the framework of the vocational education relationship, which comes about through the conclusion of a vocational education agreement between the training institution (firm) and the apprentice. The Vocational Education Law has also introduced uniform designations for the vocational education order (Ausbildungsordnung, Ausbildungsberufsbild, Ausbildungsrahmenplan, Prüfungsanforderungen). Further details of this will be dealt with in the remarks on the dual system.

2.5 Progress and Development

Impulses of the most various kinds and from the most varied directions have started a discussion in recent years on the practicability of the entire present educational system in Germany, which has led at first at least partially to changes in school organisation and curricula in all sectors. This has made clearer the necessity of reforming the whole.

During the past year, people have come to realise that an improvement of the school system is only possible through rational application of the total funds available. This was at first diluted in most of the Länder through amendments to the Basic Law with respect to the division into confessions of Grundschulen and Hauptschulen laid down in the Basic Law. Finally this was repealed and the way was opened to the establishment of more efficient school systems for children of all religious denominations. The right to establish private schools laid down in the Basic Law - which gives rise to the right to establish private schools sponsored by denominational groups - was not affected.

The desire for improved schooling for children in view of the increasing demands from a workaday world oriented more and more towards science again brought up the question of changes in curricula and a basically new structuring of the educational system.

A fundamental structural reform is recommended in the "Structural Plan for the Educational System" approved in February 1970 by the German Educational Council. The Länder Ministers of Education and Cultural Affairs have given wide approval to this plan in principle and have welcomed it as a basis for the further development of the educational system.

Among the important elements of the plan are the reorganisation of curricula and school organisation, which are being tested at present on the basis of agreements between the Länder Ministers of Education and Cultural Affairs and also the extension of compulsory full-time education to ten years as well as the lowering of the age at which children begin school by one year.

With the step-by-step realisation of the structural plan, a revision will have to be made of the rulings under the agreement on unifying the school sector which are currently binding in all the Länder.

The necessity of a new basic agreement is becoming apparent.

For the non-school vocational education sector, the Federal Government has developed its objectives for a basic reform of the dual system on the basis of the structural plan contained in its Educational Report published in mid-1970. According to this, the connection between factory training (in the firm) and theoretical vocational instruction shall be maintained. Sections of vocational training are to be increasingly taken over, however, by full-time schools, in such sectors that are specially suited for this or in which the promotion of apprentices makes it necessary. Here, it will continue to depend on making the transfer between individual educational courses easier and thus increasing permeability.

3. Elementary and Primary Education

3.1 Pre-school Education

3.1.1 Introduction

The aim and content of pre-school education are primarily regarded today in Germany from the point of view of the demands and objectives of school education, which means a break with their tradition, according to which they had no link with pre-school education.

Pre-school education involves:

1. Facilities for children between the ages of three and six that are termed kindergartens and whose work has a welfare and social-educational character. Kindergärtens are sponsored mainly by welfare organisations (Arbeiterwohlfahrt, Caritasverband, Innere Mission), and also by the town and local authorities, church communities and other societies. They are not under the supervision of school authorities.
2. Facilities for children of compulsory school age, but who have been freed from attendance temporarily because they are not mature enough. These facilities are called Schulkindergärten or Vorklassen. They are set up and supervised by school authorities.
3. Facilities to test early school attendance set up primarily by school authorities where mainly five-year-old children are prepared to Grundschule attendance by instruction tailored to their age.

3.1.2 The Kindergarten

The Kindergarten is the traditional form of pre-school education for children between three and six. In the Länder of Germany, they are maintained primarily by welfare organisations (about 75 per cent).

The state supervision of Kindergarten is done by youth and social bodies.

The work of the Kindergärten has a welfare and social character. The children are encouraged to develop their physical and mental abilities through play and other activities and handling appropriate to their age, and to accustom themselves to life in the community and Kindergarten group as well as to a regular daily course and the basic rules of hygiene.

Because of the strong demand for Kindergarten, their work is threatened with the danger of becoming merely supervisory. This is due to the fact that there is a shortage of space and trained Kindergarten teachers and that the groups are too big, which makes intensive care and promotion difficult.

In 1968, in the Länder of Germany, there were 3,080,720 children between the ages of three and six, and an availability of 15,644 Kindergarten with a total of 1,050,707 places(1). This means that only 34.1 per cent of all children between three and six attended Kindergarten.

In 1969, there were 1.1 million Kindergarten places, making 36 places per 100 children between three and five. (See Part IV, Table B.1.1).

3.1.3 The Schulkindergarten

Schulkindergarten are institutions set up by the school authorities for children of compulsory school age but who are not mature enough for school. In a number of Länder, these institutions can also take limited numbers of children who have not reached compulsory school age, but whose parents want to give their children special promotion and preparation for school.

Attendance at Schulkindergarten is voluntary. In Hesse, Lower Saxony and North Rhine-Westphalia, however, the school authorities can order compulsory attendance on the basis of legislation for children of school age who are not mature enough to attend normal school.

The legal rulings on Schulkindergarten are variously applied from Land to Land. They concur, however, in content in the important questions of organisation and objectives. The following can be said in brief.

Schulkindergarten are part of the school and are permanently linked organisationally with a Grundschule.

The aim of the work of these institutions is to create and improve the preconditions for a sound development of children's understanding, feeling and determination through as individual a promotion as possible of their powers of understanding and expression, through movement training and employment with material suited to awaken and develop the children's arbitrary attention.

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(1) Source: Federal Office of Statistics "Öffentliche Jugendhilfe 1968", "Wohnbevölkerung am 31.12.1968".

School maturity should be aimed at through a meaningful guidance of a child's desire to play and be active without anticipating the school syllabus.

Schulkindergarten are headed by special social workers and Kindergarten teachers who have a social-educational training. Grundschule teachers assist in taking care of the children.

Every year, 7-8 per cent of all school beginners are released temporarily from school attendance because they are not mature enough. In 1969, the total was 80,000. More than 26 per cent of them were accepted in Schulkindergarten. (See Part IV, Table B.1.2).

The establishment of Schulkindergarten meets with difficulties especially in the non-city Länder because of the relative scarcity of school-age but immature children and because of the difficulty in getting them together. In the city-Länder of Berlin, Bremen and Hamburg, the preconditions are far more favourable. Compared with the other Länder, there is a relatively higher proportion in the total number of Schulkindergarten in the city-Länder.

3.1.4 Institutions to Test Early School Attendance

Institutions to test suitability for early school attendance (Früheinschulung) are for children who are not of compulsory school age. They have been set up in recent years on the basis of the results of newer learning and ability research. This research has shown that many subjects and attitudes, through applying suitable methods, can be imparted earlier to children than previously supposed without any danger of overstrain.

Such institutions exist today in all the Länder. Their tasks overlap to a certain extent with those of the Schulkindergarten. This has led in Berlin to the fact that, alongside special facilities in Kindergarten, the Schulkindergarten have taken on the tasks of both these other institutions. Similar plans are also being discussed in other Länder.

The work plan of institutions to assess children's suitability for early schooling is basically similar to that of the Schulkindergarten. It is more strongly school-oriented, however, and is supplemented mainly through the introduction of reading, writing and arithmetic.

At present, there are institutions of this sort in all the Länder of the Federal Republic. The majority are in Berlin, where they are linked with Schulkindergarten. An expansion of this experiment on early schooling is planned in all the Länder. There are indications that they will develop into a kind of primary level of the Grundschule, similar to the English infants school.

Special social workers and Grundschule teachers work alongside each other in the early schooling institutions as in the Schulkindergärten.

There are not yet any special training courses for this sector. Work is going on on their development.

3.1.5. Progress and Developments

Current experiments in early schooling aim at combining this part of pre-school education with the school education at a primary level. To the same end, the German Educational Council has recommended in its structural plan the bringing forward of compulsory school age by one year. It is also recommended by the Kultusministerkonferenz in a "Recommendation on Work in the Grundschule" of 2nd July, 1970 to establish pre-school classes as the first level of the Grundschule.

The remaining institutions in the pre-school sector - the Kindergärten - are described in the German Educational Council's structural plan with the term "elementary sector". This sector is to form the first level in the educational system in the future, in which in addition to the aims of the Kindergärten there will be activities of a compensatory educational character and of an education preparing more directly for school instruction, without, however, school demands being anticipated.

Attendance at elementary sector institutions will continue to be voluntary.

3.2 The Grundschule
Structure and Development

The first level of schooling common to all children is called the Grundschule. It includes grades 1 to 4 or 1 to 6 in Berlin and Bremen.

The Grundschule was introduced in Germany as a four-year school by a law in 1920 (Reichsgrundschulgesetz).

There have been various views on the duration of such schooling ever since it was introduced, and this is reflected clearly today by the various solutions present in Germany.

The differences between the four-year and the six-year Grundschule have been widely removed by a new assessment of the fifth and sixth grade as a phase of orientation and with the increasing introduction of a school level embracing these two school years known as the Förderstufe, Erprobungsstufe or Eingangsstufe, where work is done according to a special plan.

Objectives and Instruction at the Grundschule

The aims and objectives of the Grundschule are determined by their position in the school system. The Grundschule imparts to the children, with as broad a consideration as possible of the special interests and abilities of each child, the fundamentals for further stages in education essential for life under changing social conditions.

In particular, the Grundschule should increasingly serve the aim of promoting equality of educational opportunity.

In the Grundschule during the first two grades, instruction is, for the most part, not divided into subjects at present, but is given in the form of so-called general instruction. In Berlin and Bayern the syllabuses foresee from the first school-year on instruction divided into subjects.

The number of lessons varies from Land to Land from 16 to 23 hours a week in the first grade to 20 to 26 hours in the second.

In the third and fourth grade, instruction is divided into subjects, and the number of hours is raised to 24 to 29 in the third grade and to 26 to 30 in fourth grade.

The following tables show the plan of lessons for the Grundschule in Berlin and Baden-Württemberg.

1. Berlin

Lesson Plan for the Grundschule (Classes 1-6)

Subject	No. Weekly Lessons per grade					
	1	2	3	4	5	6
Pre-Subject Instruction.......	17	21	25	27		
Maximum No. of Lessons for Beginners' Courses (Arithmetic, PE, Drawing, Music)......................	(3)	(8)	(8)	(10)		
Lessons in Transition to Instruction by Subjects						
German......................					5	5
Arithmetic..................					5	5
(Latin).....						(4)
Foreign Language					5	5
(Latin).....					(6)	(6)
History/Social Affairs 1					6	6
Nature Study and technical 2 (Latin Classes)					(5)	
Geography 3						
Primary Studies 4						
Physical Education..........					3	3
Drawing and Handicrafts.....					3	3
Music......................					2	2
	17	21	25	27	29	29

2. Baden-Württemberg

Subject	First Year B	First Year G	Second Year B	Second Year G	Third Year B	Third Year G	Fourth Year B	Fourth Year G(1)
Religion	2 or 3		2 or 3		3		3	
German Lang.	General Lessons		General Lessons		German Less. Local Hist.& Geography		German Lesson Local History & Geography	
Local History and Geography	16 Lessons		14 Lessons		14 Lessons		18 Lessons	
Singing & Music	With 8 Less. German Lang. 5 Less.Local History and Geog. incl. Singing and Drawing and 3 Less. Arithm.		With 9 Less. German Lang. 5 Less.Local Hist.& Geog. incl. Sing & Drawing		With 9 Less. German Lang. 5 Less.Local Hist.& Geog. incl. Sing & Drawing		With 10 Less. German Lang. 6 Less.Local Hist.& Geog. incl. Sing & Drawing	
Drawing			Local History and Geograph Lessons Can be Reduced by One for the Girls					
Arithmetic			4		5		5	
Physical Ed.	Daily Gymnastics and Playtime Within Scope of General Less., At Least One Lesson per Week				2		2	
Handicrafts	-	1	-	2	-	3	-	3
Total	18-19	19-20	20-21	21-22	24	26	26	28

(1) B = Boys
G = Girls

Number of Pupils and Pupil Movement

With a share of 35 per cent of the total number of pupils, the common Grundschule has the highest number of pupils of any kind of school. In 1969, Grundschulen were attended by 3.6 million pupils. In recent years, about two-thirds left Grundschulen for Hauptschulen. A good one-third left to attend Realschulen (15 per cent) or Gymnasien (22 per cent). (See Part IV, Table B.2.1).

Progress and Developments

As mentioned above, the structural plan of the German Educational Council recommends an advance of compulsory school attendance by one year. This will demand an appropriate new organisation or reorganisation of the Grundschule syllabuses, in particular of the first two classes, which are aimed at providing a gradual transition from the elementary sector to the forms of school learning.

In addition, the Educational Council also demands for the Grundschule a "basic scientific and academic orientation of syllabuses and learning processes", because they argue that there is no difference in type and value between the learning processes at the start or finish of stages of learning in the educational system.

From the same points of view, the Länder Ministers of Education and Cultural Affairs decided on 2nd July, 1970 "Recommendations on the Work of the Grundschulen", with which changes are to be introduced aimed at improving educational work in the Grundschulen. (See addendum 7).

Accordingly, the school will take more into account in the future the special interests and abilities of each individual child through greater differentiation in lessons than previously, however without dissolving the class community, as well as through the introduction of promotion instruction for weaker pupils.

Lessons, up to now characterised almost exclusively by the "Heimatprinzip"(1) with a high degree of emotional elements thrown in, are to be more subject-oriented in future, that is to say characterised by the autonomy of later lesson subjects.

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1) Heimatprinzip means the surroundings of the child local history and geography as the starting point of instruction.

With its resolution of 3rd October, 1968 on "Recommendations and Guidelines to Modernize Mathematics Lessons at Schools Providing a General Education", the Kultusministerkonferenz established a general programme for a modern mathematics lesson and instruction from the first Grundschule class to the final class at a Gymnasium. These guidelines will be binding on all Primary schools at the latest at the start of the 1972-1973 school year. (See addendum 8).

Furthermore, the Kultusministerkonferenz recommends the start of foreign-language instruction as early as possible (from about grade 3 on) in the Grundschule.

In a number of Länder, experiments are already being made with new syllabuses which take account of the aims and developments described here.

4. The Process of Transition from the Grundschule to Secondary Schools

In general the transition from Grundschule to Hauptschule follows automatically for all pupils whose parents have not applied for their children's enrolment at a secondary school (Realschule or Gymnasium) leading beyond Class 9.

If such an application is made, the Grundschule draws up a report on the pupil and passes it to the secondary school chosen for attendance. In a number of Länder, the pupil then takes part in an entrance course given by the teachers at the Grundschule and the school at which the application was made. Whether the pupil remains at the chosen school depends on this test.

In five Länder, this test instruction is only necessary when the Grundschule report does not recommend a pupil's move to either a Realschule or a Gymnasium.

After acceptance, all the pupils go through a qualifying period whose duration varies from Land to Land from six months to two years.

In a number of Länder, the new entrants get special promotion to ease the change through so-called entrance level or test stage at the Realschule or Gymnasium in the first two classes (fifth and sixth school year).

The so-called "Förderstufe" ("promotion stage") is a special form of transition from the Grundschule to the secondary-level schools. Proceeding from the idea that a decision on the further education of a pupil cannot be made in many cases after the 4th grade, school experiments with the so-called promotion stage are being carried out in several Länder.

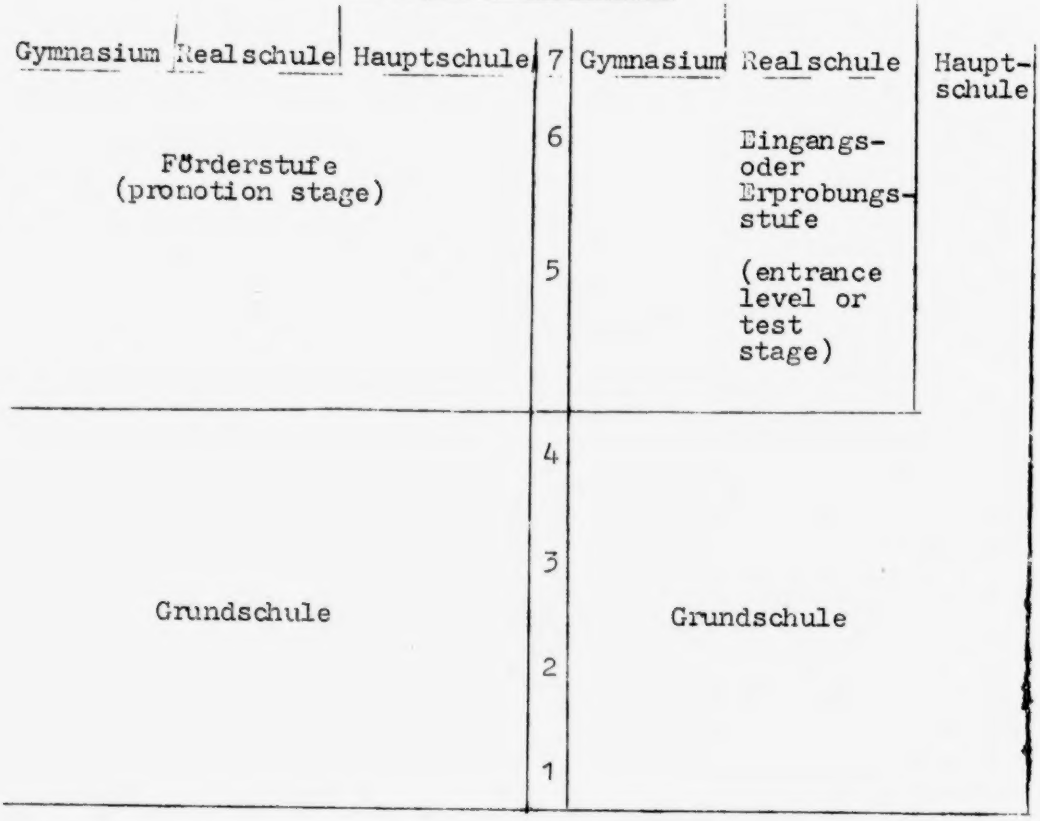
The promotion stage is a special school stage between the primary level (Grundschule) on the one hand and the secondary level on the other, and involves grades 5 and 6. Through a system of streaming, especially in subjects like German, foreign languages and mathematics, pupils varying both in maturity and talent are promoted and prepared for attendance at a suitable secondary school. After successful attendance of a promotion stage in schooling, it is possible to make the move to a secondary school without an examination or a probation period.

In Hesse, a law of 30th May, 1969 introduced generally a promotional stage, as far as staff, material and organisational preconditions were available.

In the school year 1969-1970, there were 129 such promotion stages in Hesse attended by 34,569 pupils.

The number of experiments with various processes of transition is increasing also in other Länder of Germany.

Models of Transition


Gymnasium
Realschule
Hauptschule
7
6
5
4
3
2
1
Förderstufe
(promotion stage)
Grundschule
Gymnasium
Realschule
Haupt-schule
Eingangs- oder Erprobungsstufe
(entrance level or test stage)
Grundschule

5. Secondary Education

Introduction

In the present state of discussion of school reform in the Federal Republic, the concept of the secondary school can, for the moment, only be laid down to the extent of saying that secondary schools are those which provide an education going beyond what is available in the primary school. It can, in addition, be said that the secondary education ends where the university or higher education begins without its upper limit being thus completely determined, since there are school institutions providing for vocational training, some of which allow a transfer to higher education and some of which do not. In the latter case, starting to work after conclusions of the Berufsschule (part-time vocational school) marks the upper limit of this form of secondary education.

If the criterium employed is that all children at present have full-time education for at least 9 years, and, after these 9 years, go to a part-time, vocational school for in general at least 3 years after having started work, secondary education at present ends at the very earliest after 12 years at school, inclusive of 3 years of part-time education.

Secondary schools in Germany are divided into schools providing general education and vocational schools.

General Schools are usually full-time schools, and includes "Sonderschulen", "Hauptschulen", "Realschulen", "Gymnasien", and the comprehensive schools now being developed.

Vocational Schools exist in forms of part-time and full-time school. These schools at present include "Berufsschulen", "Berufsaufbauschulen", "Berufsfachschulen", "Fachoberschulen", "Fachschulen", and "Höhere Fachschulen", which are also called "Akademien".

In recent years, composite forms have developed to an increasing extent - general schools with certain vocational emphases, opening the way to certain professions for school-leavers. The Fachoberschule (to be described in detail later) and various special forms of the Gymnasium are examples of such composite forms.

In what follows, the general schools, as they at present exist in the Federal Republic, will first be described, followed by the dual system of vocational training and vocational schools.

5.1 General Secondary Schools

5.1.1 The Hauptschule

Structure and Development

The Hauptschule is a secondary school, and comprises 5 grades in the Länder where children go to the Grundschule for 4 years, and 3 grades in Länder where children go to the Grundschule for 6 years.

Until recently, the Hauptschulen were usually incorporated with the Grundschulen in what were called "Volksschulen", and were also characterised as the "upper level of the Volksschule".

Such Volksschulen were widespread until a few years ago. In rural areas, they often only existed in undifferentiated forms down to the single-class school - as a consequence of the low number of children of school age.

A start was made in the mid-fifties - in the course of rationalising and improving the educational system - on amalgamating the upper levels of these rural Volksschulen into larger systems, known as Dörfergemeinschaftsschulen or also Mittelpunktschulen. An important impulse was thus given to the development of the upper level of the Volksschule into today's Hauptschule (see also section 2.5).

The concept of the Volksschule is traditionally associated in Germany with the idea of an institution, similar to an elementary school, for the socially less privileged sections of the population as the Volksschule was up to 1919. Up till then, pupils could go - by way of special pre-schools, which involved additional fees - directly to higher schools, and thus receive an education completely apart from the rest of the children.

The constitution of the Weimar Republic provided for the abolition of these pre-schools, and for the setting up of the Grundschule for all children. The Volksschule was then divided into a lower level for all children (the Grundschule), and an upper level in which all those children stayed for whom attendance at a secondary school was, for one reason or another, no longer possible.

The upper level of the Volksschule at first, therefore, continued to be ranked lowly. The official policy aim portrayed the Volksschule as being a school for children who were more practically oriented, and developed the idea of a specific form of basic education.

In the period that followed, the attempt was first made - by way of measures for furthering the talented - to make attendance at a Realschule or Gymnasium possible for as many sufficiently talented children as possible. Measures were taken in the spheres of financial support and school organisation, so as to open up - by way of special courses, known as development courses, at the Volksschule, or at Aufbauschulen - access to the previously mentioned secondary schools for children whose talent became apparent only later.

With this development, the upper level at the Volksschule threatened gradually to become a school for left-overs, at which finally only those children remained who were not to be advanced any further. The way for a transformation of this situation was prepared when more and more people accepted the view that the demands made today by the social existence and the world of work the school-leaver enters upon after completing the Volksschule course no longer correspond to the educational aims and content of the old Volksschule, and demand better preparation. The "Deutscher Ausschuss für das Erziehungs- und Bildungswesen" (German Commission on Education) formulated these problems in a recommendation on the development of the Volksschule in March 1957, and in a later recommendation on the development of the Hauptschule.

Proposals for a solution were disseminated, calling for an extension of the upper level in the Volksschulen and differentiation of teaching so as to further differing talents (see also section 7). These recommendations first made their influence felt in the Hamburg Agreement. On 3rd July, 1969, the Länder Ministers of Education finally decided on their "Recommendations on the Hauptschule", in which they laid down their views on the Hauptschule as a secondary school, and established yardsticks for its further development (see appendix 9).

Objectives and Instruction in the Hauptschule

The tasks and objectives of the Hauptschule are expressed in the recommendations by the Conference of Ministers of Education

> "The Hauptschule should enable the pupil to find access to cultural life, to become part of political and social life; and to participate, according to his capacity, in working life."

Special significance is accorded here to the introduction of an obligatory foreign language (usually English) and to introducing pupils to the economy and the world of work, whereby this entire complex becomes a subject ("Arbeitslehre") fulfilling an important function. It is intended to provide the pupil with understanding, knowledge, and ability in the technical and economic and the social and political spheres, all of which are seen today as being necessary components in basic education for every citizen.

This subject thus includes description of the structures and demands of productivity entailed in the economy and the world of work; education in behaviour at work, and especially in concentration, accuracy, ability to adapt and co-operate, in economic thought and planned action; and also orientation about groups and spheres of professions in preparation for a reasonable choice of profession.

This subject - as is apparent from the foregoing - is more than one of the classical teaching subjects. It is basically a principle encroaching on individual subjects, leading, above all, to a re-orientation of teaching to date in practical instruction, domestic science, and textiles towards a training that puts more stress on the natural sciences and technology.

The teaching of mathematics and foreign languages in the Hauptschule takes place in what are known as "Leistungskurse" (differentiated according to achievement) in order to do more justice to variations in pupils' learning capacity and to make possible the attaining of qualifications in other kinds of schools. Differentiated teaching is also provided in other subjects as far as this is possible.

In the following are given time-tables of the Hauptschule in Rhineland-Palatinate (an extended area) and in Berlin (a city) as examples of subjects taught and number of lessons. The notes of the time-tables give additional information.

Timetables for the Hauptschule

1. Rhineland-Palatinate

	School Year														
	5			6			7			8			9		
	Class unit	Course A	Course B	Class unit	Course A	Course B	Class unit	Course A	Course B	Class unit	Course A	Course B	Class unit	Course A	Course B
Religion	3			3			3			3			3		
German	4	2	2	4	2	2	3	2	2	3	2	2	3	2	2
History	1			2			2			2					
Geography	2			2			2			2			1		
Civics							1			2			3		
English(1)		4	4		4	4		3	3		3	3		3	3
Mathematics		5	5		5	5		4	4		4	4		4	4
Physics/Chemistry	1			2			2			2			2		
Biology	1			2			2			2			2		
Music(2)	2			2			2			2			2		
Art(2)	1			1			2			2			2		
Handicrafts (boys)	2			2			4			4			4		
Physical Education	3			3			3			3			3		
The Family (girls)													4		
Textile Design	2			2			2			2					
Domestic Science(3)							2			2					
Group Activities							2			2			3		
Total	31			34			35			36			36		

(1) Pupils, who show a special interest in English, can also participate voluntary study group (two hours weekly) in addition to the obligatory lessons. Such a study group should primarily be set up for A Course pupils in their 5th and 6th grade. Pupils, who do not take part in English lessons because of their inadequate performance, are instead taught German, Mathematics, and handicrafts in special groups.

(2) Music and Art are optional subjects from the 7th grade onwards. Every pupil must take one of these subjects.

(3) Instruction in domestic science is to be given in the 8th grade with 4 hours teaching every fortnight.

In consideration of the "Arbeitslehre" it is recommended for th 8th and 9th grade that instruction in handicrafts and domestic science should be combined with one German lesson and one lesson in another subject involving work studies in the timetable for a single weekday.

(Source: Timetable for the Hauptschule in Rhineland-Palatinate dated 1st December, 1965).

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2. Berlin

Number of lessons in classes

Teaching unit	Subject	per week	per year	Remarks	per week	per year	Remarks
Teaching by classes	German	5	200		8	80	
	History/Civics	2	80			40	alternating with World Affairs
	Geography	2	80			40	
	World Affairs	-	-			160	
	Physics Chemistry Biology			alternating			
	Music Art Physical Education			alternating			
Teaching differentiated according to achievement	Mathematics	4	160		4	160	
	English	4	160		3	120	
	Work Studies	4(a)	160		8(b)	320	
	Obligatory No. of hours	31	1240		33	1320	
Optional lessons	3.5% of a pupil's total number of lessons are to be devoted to this sphere						

Notes

(a) Until the time when the skeleton plans for "Arbeitslehre" come into force, the lessons set aside for "Arbeitslehre" are to be used for Handicrafts/Textile Design/Domestic Science.

(b) Until the number of lessons per week set aside in the 9th and 10th grades for "Arbeitslehre" have come into effect, only 6 lessons are to be given and employed for Handicrafts/Textile Design/Domestic Science or else Music/Art.

That will result, for the moment, in a weekly total of 31 lessons for the 9th and 10th grades.

(c) The terminal classes 7E and 8E will work according to the timetable in class levels 9 and 10, in order to put across aspects of World Affairs and to devote more time to "Arbeitslehre". There will be a total of 31 lessons weekly. Teaching of foreign languages will be dropped, and the teaching of Mathematics will be extended to 5 lessons.

(Source: Memorandum of the Berlin Senate III/1968, No. 6 p. 12)

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Transfers and Qualifications

The transfer of pupils in the Hauptschule to Realschulen or Gymnasien is in principle - in the case of individual aptitude - possible at every level.

The transfer to Realschulen or Gymnasien usually takes place, however, after the Grundschule (i.e. after the fourth or sixth grade), or after the seventh or else, at the latest, the eighth grade. Transfer after the seventh or eighth grade takes place within special forms - which are called Aufbauzuege (extension courses) of the Realschule and Gymnasium. In North Rhine-Westphalia, the extension courses start as early as after the sixth grade.

All pupils are provided with the possibility of an additional qualification by way of inclusion of achievements in differentiated courses in the leaving certificate.

In Bavaria, pupils, who have completed specific differentiated courses (Mathematics, Physics, Chemistry), can take part in an examination which will give them - if they pass - an additional qualification. In other Länder in the Federal Republic, similar possibilities of further qualification for successful pupils at Hauptschulen are being striven for, extending up to the offer of a tenth year at school making possible a qualification equivalent to Realschule leaving certificate.

The majority of children leaving the Hauptschule move on to vocational training, and at the same time to go a Berufsschule. A summary of the vocational groups open to these school-leavers is provided in appendix 10.

Pupils at a Hauptschule are offered possibilities of further school education within the sphere of the vocational schools. Let it merely be observed here that these pupils can gain access to a Fachhochschule, and thus to higher education, by way of successful attendance at a Berufsaudbauschule and a Fachoberschule.

Number of Pupils and Pupil Mobility

There were 2.4 million pupils at Hauptschulen in 1969. That was more than half (57 per cent) of the total number of pupils in the fifth to tenth school years (Secondary Level I).

Sixty-three per cent of the pupils in the first class in this Secondary Level I are in the Hauptschule. The lower percentage in terms of the total number of pupils in the Secondary Level I is the outcome of transfers from classes in the Hauptschule to Realschulen and Gymnasien. These exceed transfers in the other direction (cf. Part IV, Table B.2.1).

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Further Developments

The Hauptschule is at present still in the process of transformation from the old-style upper level of the Volksschule to the new conception of a secondary school (drawn up in the recommendation made by the Conference of Ministers of Education of 3rd July, 1969).

Even though the Hauptschule's objectives are largely independent, the subject-matter taught in classes five to nine approximates to that in the two other kinds of secondary school. This thus makes possible planning and experiments aimed at closer co-operation between these schools within larger systems up to the point of integration. The development in this direction is based on both the necessity of the creation of equal educational chances and also on the necessity of rationalisation in the interests of better utilisation of the totality of available funds. Equality of chances and rationalisation can be seen as the basic driving forces in present developments in the educational system.

In the German Education Council's structural plan, secondary school classes 5 to 10 are termed Secondary Level I, which is concluded with what is known as "Abitur I", and classes 11 to 13 are termed Secondary Level II, which leads to Abitur II.

With the extension of compulsory full-time schooling from 9 to 10 years, the Education Council at the same time recommends changing a system that involves various forms of secondary school of ascending rank in favour of closer co-operation on the basis of joint curricula, a foundation enabling every pupil to acquire a joint basic education and to attain courses within Secondary Level II (depending on previous learning and achieving patterns)(1).

The Education Council has also proposed in continuation of its reflections on closer co-operation between the various secondary schools (and independently of the previously mentioned changes in school organisation) that experiments be carried out to try out the integration of secondary schools in comprehensive schools. The Ministers of Education of the Länder contracted in an agreement dated 27th November, 1969 to organise a joint experimental programme to test our comprehensive schools.

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1) German Education Council - "Structural Plan" P. 150 ff.

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5.1.2. The Realschule

Structure and Development

The Realschule is a school in the secondary sector leading to the tenth grade, and in its normal form, which depends on the length of time spent at the Grundschule, comprehends grades 5 to 10 or 7 to 10. There is also a three-year extension course (Aufbauform) for the pupils from the Hauptschule who transfer only after the seventh grade. A four-year extension course of the Realschule is widespread in North Rhine-Westphalia.

In Bavaria, the normal form of Realschule also has four grades.

Up to the time of the conclusion of the Hamburg Agreement, the Realschule was termed Mittelschule, an expression of the fact that this is a form of school between the former Volksschule and the Gymnasium.

The Realschule developed from various origins to what is essentially its present form at around the turn of the century. Prussian regulations dating from 1910 laid down that the then Mittelschule should comprise nine grades. The school was subdivided into three sections, each with three grades - the lower level, the intermediate level, and the upper level. School-beginners were trained in the lower level. A transfer from the third grade in the Volkesschule (today the third grade in the Grundschule) was, however, also possible.

In 1925, the Mittelschule in Germany was constituted as a school with a six year course, building on the four year Grundschule course.

In a resolution dated 17th December, 1953 on the "Position of the Mittelschulen in the development of schools", the Länder Ministers of Education largely confirmed this regulation, in the process taking into account differing lengths of Grundschule courses in the Länder.

Objectives and Instruction

The Realschule, following the educational objectives laid down in the Länder curricula, prepare their pupils for tasks with high demands on independence, responsibility, and leadership in predominantly practical jobs. The Realschule is distinguished from the Hauptschule by the longer course of studies, the greater variety of courses in languages (two foreign languages, one of which is obligatory) and natural sciences, and by efforts to go deeper into the structure of the subjects taught.

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Timetables of the lessons taught at the four-year Realschule in Hamburg and the six-year Realschule in North Rhine-Westphalia serve as examples of the subjects covered and the number of lessons involved.

Timetables for the Realschule

1. Hamburg

Grades 7 - 10

Subject	Grade				
	7	8	9		10
			Boys	Girls	
1. German	4	4	4	4	4
History	2	2	2	2	2
Civics	2	2	2	2	-
Geography	2	2	2	2	1
Politics	-	-	-	-	2
Religion	2	1	1	1	1
2. Mathematics	4	4	4	4	4
Physics, Chemistry	2	2	2	-	2
Biology	1	2	2	2	2
3. Art, Music	3	3	3	3	3
Handicrafts, Textiles	2	2	2	-	2
Domestic Science	-	-	-	4	-
4. Physical Education	3	3	3	3	3
5. English	4	4	4	4	3
6. Courses (choice of subjects)	-	2	2	2	2
	29	31	31	31	31

The following divisions of classes can be organised:

Subject	R7	R8	R9		R10
			Boys	Girls	
Total number of pupils' lessons	29	31	31	31	31
Biology, Physics, Chemistry	3	4	4	2	4
Handicrafts, Textiles	2	2	2	-	2
Domestic Science	-	-	-	4	-
Swimming	-	-	-	-	-
Languages, Courses	-	2	2	2	2
Additional Teaching	-	-	-	-	-
Total number of teacher lessons	34	39	39		39

(Source: Guidelines for the Volksschule and Realschule, Hamburg)

2. North Rhine-Westphalia

	5	6	7	8	9	10	Total
Religion	2	2	2	2	2	2	12
German	5	6	4	4	4		27
History	1	2	2	2			
Geography	2	2	2	2	4	8	23
Civics	-	-	-	-			
English	6	5	4	4	4	4	27
Mathematics	5	5	5	4	4	4	27
Physics	-	-	2	2	2	2	8
Chemistry	-	-	-	2	2	2	6
Biology	2	1	2	2	2	2	11
Physical Education	2	2	2	2	2	2	12
Art	2	2					
Handicrafts			3	3			
Textile Design	2	2			4	2	27
Music	2	2	2	1			
Choice of Subject(1)	-	-	4	4	4	3	
Domestic Science for girls(2)	-	-	-	-	-		18
Group activities for boys(2)	-	-	-	-	-	3	
	31	31	34	34	34	34	198

1) see Note 2 - 3. see Note 3.

1. For the 5th to 10th School year (grades 1 - 6) there is a two hour sports afternoon every fortnight. Girls who, in the 9th School year (grade 5) choose the 3 hour group activity in Domestic Science, do not have to take part in this sports afternoon.

2. The subjects from which a choice can be made are:
   (a) for the 7th and 8th school year (grades 3 and 4), French or Social Studies and Economics;
   (b) for the 9th and 10th school year (grades 5 and 6), French, or Applied Mathematics, Physics, Chemistry, and Biology, which can be offered as single subjects or as combinations of subjects.

3. For girls, an additional 3 hour group activity in Domestic Science is to be established in the 9th school year (grade 5) as an optional subject. In the 10th school year (grade 3) as an optional subject. In the 10th school year (grade 6), girls have to take part in a 3 hour group activity in Domestic Science. For boys, lessons are to be offered in Social Studies and Economics, or in the artistic and technical sphere. These are optional in the 9th school year (grade 3) and obligatory in the 10th school year (grade 6).

4. Girls in the 5th and 6th school years (grades 1 and 2) can also receive two optional lessons weekly in Textile Design. In classes of girls at Realschulen for boys and girls, one of these lessons will be instead of Handicrafts and one will be additional.

5. At Realschulen for boys, one additional hour of Physical Education is permitted in place of one Handicrafts lesson.

6. Musical group activities for choir, orchestra, and circles of players are to be introduced as an optional extra on account of their importance for the dissemination of culture in the Realschule and for the organisation of school ceremonies.

Should alterations in the timetable be necessary because of the circumstances prevailing at a school, these must be decided on in consultation with the school inspectorate. The circular dated 29th January, 1963 directing a reduction in the number of lessons taught on Saturday is cancelled. Instead, up to four 45 minute lessons, plus the usual breaks, will be given per class. Teaching will end on Saturday at 12 at the latest.

(Source: Official Gazette North Rhine-Westphalia 1967)

Transfers and Qualifications

Transfer from the Realschule to the Gymnasium before completion of the Realschule course is possible in all Länder except Bavaria. Such transfers take place between the fifth and ninth school years under conditions varying from Land to Land.

In the case of transfer to the normal form of the Gymnasium after the seventh school year, it is, however, a precondition that the pupil has taken part in the optional course in a second foreign language as offered in the Realschule.

Transfer to the Gymnasium (after completion of the Realschule course) is also possible in all Länder without exception. There are, however, various forms of assessment involved. In addition, Schleswig-Holstein has set up four-year Aufbaugymnasien for pupils who have successfully completed class 9 in the Realschule.

The possibilities of transfer (as of 1968 according to Land) are summarised in the two following tables:

1. Transfer from the Realschule to the Gymnasium before completion of the Realschule course

Land	Grade	Form of Gymnasium	2nd language
Baden-Württemberg	5 - 9	Normal form	yes, after 7th school year
Bavaria	-	-	-
Berlin	8		no
Bremen	7 - 9	Normal form	yes, after 7th school year
Hamburg	8	Dev. form	no
Hesse	5 - 9	Normal form Dev. form	yes, after 7th school year
Lower Saxony	5 - 9	Normal form	yes, after 7th school year
North Rhine-Westphalia	5 - 9	Normal form Dev. form	yes, after 7th school year
Rhineland-Palatinate	5 - 9	Math.-nat.-Gymn.	yes, after 7th school year
Saarland	5 - 9	Normal form	yes, after 7th school year
Schleswig-Holstein	5 - 9	Normal form	yes, after 7th school year

2. Transfer from the Realschule to the Gymnasium after completion of the Realschule course

Land	Grade	Form of Gymnasium	2nd language
Baden-Württemberg	11	Normal form	yes
Bavaria	10 or 11	Math.-nat.-Gymn.Economics	yes
Berlin	11	Dev. form	no
Bremen	10 or 11	Normal form	yes
Hamburg	10	Dev. form	no
Hesse	11	Normal form	yes no
Lower Saxony	10 or 11	Normal form	yes
North Rhine-Westphalia	10 or 11	Normal form	yes no
Rhineland-Palatinate	11	Math.-nat.Gymn.	yes
Saarland	10 or 11	Normal form	yes
Schleswig-Holstein	10 or 11	Normal form	yes

(Source: "Schulführer" Chr. Wegner Verlag, Hamburg 1968, p. 149)

Completion of the Realschule course is variously organised. In eight of the eleven Länder in the Federal Republic, the leaving certificate of the Realschule is issued after completion of the tenth grade providing the pupil's performance has been at least adequate.

In Baden-Württemberg, Bavaria, and Schleswig-Holstein, the leaving certificate is gained by way of passing a written and oral examination at the end of the tenth grade.

Pupils who have completed the Realschule course have - apart from transfer to the Gymnasium - the possibility of continuation of school education at a number of schools within the vocational sphere the attendance of which demands completion of the Realschule course. Among such schools are various Berufsfachschulen, the two-year Fachoberschulen (at which a qualification can be gained that opens the way to a specific sector in the university sphere), and the Wirtschaftsgymnasium and Fachgymnasium, which demand knowledge of only one foreign language and lead to a restricted course of university studies and in certain Länder to general studies.

Most of those who have completed a Realschule course move on to vocational training. A number of the professions open to possessors of the Realschule terminal report are enumerated in Appendix 11.

Number of Pupils and Pupil Mobility

In 1969, 839,300 pupils visited Realschulen inclusive of corresponding provision in the Hauptschulen (Realschulzüge). In 1967, pupils who completed the Realschule course (inclusive of school-leavers from the Gymnasium, who have successfully completed the tenth school-year) constituted 22 per cent of their age group. (cf. Part IV, table B.2.1.)

Progress and Development

The statement in the previous section on the further development of the Hauptschule also applies to the further development of the Realschule.

5.1.3. The Gymnasium

Organisation and Development

"Gymnasium" is a collective term for all general schools in the secondary sphere that lead to the thirteenth grade, and at which, after successful completion of this thirteenth grade, a final examination can be taken, passing of which provides the qualification for entrance to university or equivalent institutions (Hochschulreife).

A distinction is made between Gymnasien whose final examination (general university qualification or Abitur) makes possible the study of all subjects at university, and those at which only the right to study certain subjects or groups of subjects can be gained (fachgebundene Hochschulreife). These differences and their significance will be discussed later.

The Gymnasium, in its normal form, incorporates grades 5 to 13, or 7 to 13, depending on the length of Grundschule course. There are also what are called extension courses, to which pupils of the Hauptschule can transfer after the seventh grade (in North Rhine-Westphalia after the sixth grade). Especially qualified Realschule pupils can also transfer after the tenth grade (in Schleswig-Holstein after the ninth grade too).

According to the Hamburg Agreement, curricula and timetables in the normal form of Gymnasium, teaching two foreign languages, should not differ (except in the order in which the languages are introduced) up to and including the tenth grade.

Organisation into various types of Gymnasien should only begin from the eleventh grade.

The Gymnasium developed out of the schools of Latin in the Middle Ages, and have always had the function of providing access to the university.

They became of decisive importance for access to the universities in Germany by way of a regulation introduced in Prussia in 1834. University entrance examinations were then abolished, and immatriculation (with the right to later admission to university finals) was coupled with passing the leaving examination at the Gymnasium(1).

What were known as Realgymnasien and Oberrealschulen developed - before the turn of the century - alongside the humanistic Gymnasium with its emphasis on Latin and Greek.

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1) Until that time there was the possibility of taking a university entrance examination in place of the leaving examination at the Gymnasium. Acceptance for studies did not, however, depend on passing such an examination at either the school or university. All that was involved was acceptance for promotion for what were known as University benefices.

In his "Geschichte des gelehrten Unterrichts" (Leipzig 1897, p. 94), Friedrich Paulsen quotes a Prussian directive dating from 1788, in which is said: "It is not intended to limit civil freedom to such an extent that a father should not be at liberty to send his son to university, even if he be incapable and immature."

The Realgymnasium still taught one classical language (Latin) together with French and English, while the Oberrealschule only offered modern languages.

The basic forms of the Gymnasium today - specialising in classical languages, modern languages, and mathematics and natural sciences - developed from these three types, whose school-leaving certificates entailed different qualifications and rights to study(1) until they were made equivalent in 1901.

Gymnasien specialising in social sciences, economics, and the arts, which lead to the general university qualification, and Gymnasien specialising in business studies, women's education, and domestic science, which lead to the restricted subject university qualification, have developed in recent years in a course of far-reaching differentiation. Other special forms exist in individual Länder (the technical Gymnasien in Baden-Württemberg and Schleswig-Holstein, the Gymnasien specialising in educational theory and in the arts in North Rhine-Westphalia, and the practically oriented-Gymnasien in Baden Württemberg), which lead partly to subject-restricted and partly to general university qualification.

Objectives in Instruction in the Gymnasien

Bringing pupils up to the qualification demanded for university entrance - in other words, the provision of a scholarly basic education - is stressed as being the central task in the curricula of Gymnasien in all the Länder.

Specific demands of a formal and material nature are linked with the concept of university qualification. These were drawn up by, on the one side, delegates of the Permanent Conference of Länder Ministers of Education and Cultural Affairs, and, on the other, the Conference of Rectors of Universities in the Länder of the Federal Republic (Westdeutsche Rektorenkonferenz) at a meeting at Tutzing in Bavaria in 1958 as what is known as the "Tutzinger Catalogue of Maturity" (see appendix 12). The essential demands laid down in this catalogue are command of the German language both spoken and written, comprehension of the works of German and world literature, command of a foreign language and good knowledge of a second language (whereby one of these languages should be Latin or French), knowledge of Mathematics and the natural sciences to a specific extent, of history, philosophy, and religion. Consciousness and comprehension of problems is expected as well as knowledge per se.

The demands laid down in the Tutzinger Catalogue of Maturity also constitute the basis for a series of agreements between the Länder on the organisation of Gymnasien, on

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1) The humanistic Gymnasium led to the general university qualification, while the Realgymnasium and the Oberrealschule led to the subject-restricted university qualification.

reciprocal recognition of qualifications, gained at Gymnasien, for general university studies (see appendices 13 - 16), and on curricula and examinations in individual Länder.

It is thus laid down that German, mathematics, biology, geography, music, art, physical education, and the first foreign language (usually English or Latin) are obligatory in grades 5 - 11 at the Gymnasium.

The other obligatory subjects are the second foreign language in classes 7 - 10, history in grades 7 - 11, physics in grades 8 - 11, and chemistry in at least two of the grades 9 - 11. Practical subjects (workshops) and needlework can also be obligatory in some grades.

A third foreign language can be learnt from the ninth grade.

Religious teaching takes place according to the regulations in the Land concerned.

German and mathematics are compulsory in grades 12 and 13 of all kinds of Gymnasium. There are also two other compulsory subjects (depending on the kind of school involved) at least one of which is a foreign language. Physical education, art or music, civics, and one subject of the natural sciences chosen by the pupil himself are also compulsory.

It becomes clear from the foregoing description and the timetables of the various kinds of schools below that the number of subjects from grade 12 onwards is restricted compared with the lower and intermediate levels at the Gymnasium.

This restriction was undertaken - in accordance with the agreement reached by the Länder Ministers of Education on 29th September, 1960 (see appendix 17) - so as to make possible, through this reduction in the number of subjects, a concentration of subject-matter and a corresponding intensification of teaching. This is intended to further education of the pupil up to intellectual initiative and responsibility.

The catalogue of subjects sketched above contains in full the demands made for attainment of the general university qualification.

The Gymnasien that lead to subject-restricted university qualification are mainly extension courses of the Gymnasien, which comprehend grades 11 - 13 and are intended for pupils from Hauptschulen, Realschulen, or schools in the vocational sphere.

The subject-restricted university qualification represents a special form of access to the university for which only one foreign language is demanded. This qualification can be gained at certain institutions in the vocational educational system (Higher Fachschulen and Ingenieurschulen) as well as at Gymnasien.

Examples of the range of subjects involved and the number of hours spent on individual subjects are provided in the following tables:

a) Timetables for the joint intermediate level and for the various types of upper level at Gymnasien in Berlin, where transfer to the Gymnasium takes place after the sixth year in the Grundschule.

b) Timetables for the humanistic (classical languages) Gymnasium in Bavaria, transfer to which takes place after the fourth grade in the Grundschule.

c) Timetables for Hamburg Gymnasien specialising in modern languages or the natural sciences with joint lower and intermediate levels. Transfer takes place after class 4 in the Grundschule.

a) Berlin

Timetable 1

Joint intermediate level

Subject	Number of weekly lessons per grade			
	Grade 7	Grade 8	Grade 9	Grade 10
German	4	4	3	3
History/Civics	2	2	3	3
Geography	2	2	2	2
1st language	4	3	3	3
2nd language	5	5	3	3
Choice of subject	-	-	4	3
Greek	-	-	(6)	(6)
Mathematics	4	4	4	4
Physics	-	2	2	2
Chemistry	-	-	2	2
Biology	2	2	-	3
Music	2	4	4	4
Art/Handicrafts	3	4	4	4
Physical Educatio	3	3	3	2
Total	31	31	33	33

Timetable 2

Upper level - stress on classical languages

Subject	Number of weekly lessons per grade		
	grade 11	grade 12	grade 13
German	3	4	4
History/Civics	3	-	-
Geography	2	-	-
World Affairs	-	4	4
Latin	4	4	4
Greek	6	6	6
Mathematics	3	4	4
Physics	2	3	3
Chemistry	2	-	-
Biology	2	(3)	(3)
Music	4	2	2
Art	4	(2)	(2)
Physical Education	2	2	2
Total	33	29	29
Optional lessons	(4)	(8)	(8)
Total	37	37	37

Timetable 3

Upper level - stress on modern languages

Subject	Number of weekly lessons per grade		
	Grade 11	Grade 12	Grade 13
German	3	4	4
History/Civics	3	-	-
Geography	2	-	-
World Affairs	-	5	5
1st language	4	4))9	4))9
2nd or 3rd language	5	5)	5)
Mathematics	3	4	4
Physics	3	3	3
Chemistry	2	-	-
Biology	2	(3)	(3)
Music	))4	2	2
Art	)	(2)	(2)
Physical Education	2	2	2
Total	33	29	29
Optional lessons	(4)	(8)	(8)
Total	37	37	37

Timetable 4

Upper Level - stress on mathematics and natural sciences

Subject	Number of weekly lessons per grade		
	Grade 11	Grade 12	Grade 13
German	3	4	4
History/Civics	3	-	-
Geography	2	-	-
World Affairs	-	5	5
1st language	2) 6	4	4
2nd language	4)	-	-
Mathematics	5	5	5
Physics	3	4	4
Chemistry	3) 5	3	3
Biology	2)	(3)	(3)
Music	4	2	2
Art		(2)	(2)
Physical Education	2	2	2
Total	33	29	29
Optional Lessons	(4)	(8)	(8)
Total	37	37	37

Timetable 5

Upper level - stress on the arts

Subject	Number of weekly lessons per grade		
	grade 11	grade 12	grade 13
German	3	4	4
History/Civics	3	-	-
Geography	2	-	-
World Affairs	-	5	5
1st language	2	4	4
2nd language	4	-	-
Mathematics	2	4	4
Physics	2	3	3
Chemistry	2	-	-
Biology	2	(3)	( )
Music Art	7	7	7
Physical Education	2	2	2
Total	33	29	29
Optional lessons	(4)	(3)	(3)
Total	37	37	37

Timetable 6

Upper level - stress on economics

Subject	Number of weekly lessons per grade		
	Grade 11	Grade 12	Grade 13
German	3	4	4
History/Civics	3	-	-
Geography	2	-	-
World Affairs	-	5	5
Economics	5	6	4
1st language	2 6	4	4
2nd language	4	-	-
Mathematics	3	4	4
Physics	2	3	3
Chemistry	2	(3)	(3)
Biology		-	-
Music	3	2	2
Art		(2)	(2)
Physical Education	2	2	2
Total	32	29	29
Optional lessons	(5)	(8)	(8)
Total	37	37	37

Timetable 7

Upper level - stress on the social sciences

Subject	Number of weekly lessons per grade		
	Grade 11	Grade 12	Grade 13
German	3	4	4
History	2	-	-
Geography	2	-	-
World Affairs	-		
Social Sciences	5	5	5
1st language	2) 6	4	4
2nd language	4)	-	-
Mathematics	3	4	4
Physics	2	3	3
Chemistry	2	-	-
Biology	2	(3)	(3)
Music	4	2	2
Art		(2)	(2)
Physical Education	2	2	2
Total	33	33	33
Optional lessons	(4)	(3)	(3)
Total	37	37	37

(Source: Official Gazette Berlin III/1968, p.14)

b) Bavaria

Timetable for Gymnasien

A. Humanistic Gymnasium

Grades	5	6	7	8	9	10	11	12	13	Total
Obligatory subjects:										
Religion	2	2	2	2	2	2	2	2	2	18
German	5	5	4	4	4	4	4	4	4	38
Latin	6	6	5	6	4	5	5	5	5	47
English	-	-	4	4	3	3	3	-	-	17
Greek	-	-	-	-	6	6	5	6	6	29
Mathematics	4	4	4	4	3	3	3	4	-	29
Natural Sciences:										
Physics	-	-	-	-	2	2	2			6
Chemistry	-	-	-	-	-	-	2	4	4	2 + 8
Biology	2	2	2	2	2	2	-			12
Civics:										
History	-	-	2	2	2	2	2	2	3	15
Geography	2	2	2	2	2	-	2	1	1	14
Social Studies	-	-	-	-	-	1	-	1	1	3
Art	2	2	2	2	1	1	1	2	2	11 +4
Music	2	2	2	1	1	1	1			10
Physical Education	2	2	2	2	2	2	2	2	2	18
Writing	1	1	-	1	-	-	-	-	-	3
	28	28	31	32	34	34	34	33	30	284
Group Activities:										
English	-	-	-	-	-	-	-	2	2	4
Mathematics	-	-	-	-	-	-	-	-	2	2
Needlework (only girls)	2	2	2	2	-	-	-	-	-	8
Participatory music Choir and orchestra (1 or 2 hours weekly)										
Optional subjects:										
Shorthand	-	-	-	2	2	-	-	-	-	4
French	-	-	-	-	-	3	3	2	-	8
Italian	-	-	-	-	-	2	2	-	-	4
Spanish	-	-	-	-	-	2	2	-	-	4
Russian	-	-	-	-	-	3	3	2	-	8
Hebrew	-	-	-	-	-	-	-	2	2	4
Philosophy	-	-	-	-	-	-	-	1	1	2
Drawing (from the 8th grade)										
Instrumental music (violin, viola, cello, double-bass)	one to two hours weekly in each case									
Needlework (only for girls from the 9th grade)										

(Source: School regulations and their implementation for Gymnasien in Bavaria, 1968)

c) Hamburg

Timetable for grades 5 to 10 in Gymnasien where the emphasis is on modern languages and on mathematics and the natural sciences

Grade	5	6	7	8	9	10	5 - 10
Religion	2	2	2	1	1	2	10
German	5	5	4	4	4	4	26
History	-	-	2	2	2	2	8
Geography	2	2	2	2	3	2	11.5/21.5
Civics	-	-	-	-	-	2	2
Music	2	2	2	2	2	2	12/24
Art	2	2	2	2	2	2	12
Physical Education	3	3	3	3	3	3	18
1st language	5	5	4	4	3	3	21
2nd language	-	-	5	4	4	3	16
3rd language	-	-	-	-	-	-	-
Class	5	6	7	8	9	10	5 - 10
Mathematics	5	5	4	4	4	3	25
Physics	-	-	-	2	2	2	6
Chemistry	-	-	-	-	2	2	4
Biology	2	2	2	2	epoch.	2	11.5
Handicrafts or Needlework	2	2	-	-	-	-	4
Total	30	30	32	32	33	34	191

c) Hamburg

Timetable for grades 11 to 13
at Gymnasien where the emphasis is on modern languages
and on mathematics and the natural sciences

- valid from 1st April, 1967 -

Grade	11	12	13
General subject group			
Religion	2	2	2
German	4	4	4
History	2	-	-
Geography	2	-	-
Civics	-	4	5
Music	2		
Art	2		
Physical Education	3	3	3
	17	15	16

	m.l.	m-n.a	m.l.	m-n.s.	m.l.	m-n.s.
1st language	3	3	4	4	4	-
2nd language or	4	-	4	-	4	-
3rd language	4	-	5	-	5	-
Mathematics	3	4	4	5	-	5
Physics	2	2+1	-	4	-	4
Chemistry	2	2+1	-	-	-	-
Biology	2	2+1	-	-	-	-
Choice of subject			3 Nat. Sciences	3 Chem. Bio.	3 Nat. Sciences	3 Chem. Bio.
Number of obligatory lessons	33	33	30(31)	31	27(28)	28
Group Activities		2	5(4) optional	4	7(6) optional	6
Total	35		35		34	

(Source: Official Gazette Hamburg 1967)

Transfers and Qualifications

Transfers from the Gymnasium to other general schools (Hauptschule, Realschule) usually means that the pupil was not up to the demands made by education at a Gymnasium and has chosen a shorter and less difficult way towards completion of compulsory full-time attendance at school. A distinction is to be made between such transfers and those that take place after the ninth grade at the Gymnasium and thus after the compulsory period of full-time school attendance has been completed. In such cases, it is usually a question of a breaking off of the course at the Gymnasium and of a transfer to a Realschule, or a Berufsfachschule, or so as to start on vocational training while going to a Berufsschule.

The social prestige associated with schooling at a Gymnasium and the fact that Realschulen are still less widely spread than Gymnasien account for many children being sent by their parents to a Gymnasium so as to gain - in the qualification permitting continuation after the tenth grade - a qualification corresponding to completion of the Realschule course, and then to start on vocational training or a vocational school. This state of affairs results in a comparatively high number of school-leavers after grade 10 at the Gymnasium. These school-leavers should not be immediately associated with today's internationally discussed "drop-outs", and their number is constantly decreasing as there are more and more Realschulen.

The final examination at the Gymnasium consists of a written and an oral part. Every examinee has to write a paper, under supervision, in four subjects, which always include German, mathematics, and a foreign language, plus a subject dependent on the type of school involved.

The oral examination can involve the same subjects plus civics, and another subject chosen by the examinee. In some Länder, the examination in one of the four main compulsory subjects can be completed at the end of the twelfth grade (Vorabitur).

Those who have completed the Gymnasium course and possess the leaving certificate can move on to university and study there. This leaving certificate is in addition also the precondition for entering on a number of jobs and professions that do not call for university study.

A selection of jobs that demand the school-leaving certificate but not study at a university is enumerated in appendix 17.

Number of Pupils and Pupil Mobility

In 1968, 984,700 pupils attended the six year courses involved in the Secondary Level I at the Gymnasium, which produces the same qualifications as completion of the Realschule course. That amounts to an average attendance of around 164,000 pupils per school year (Realschule = 128,800). The total of 94,700 pupils per school year in the Secondary Level II, which leads to the Abitur, is clearly comparatively less.

In 1968, 9 per cent of the relevant age group gained the Abitur - 11 per cent of the male population, and over 7 per cent of the female. For the latter, this marked a c. 76 per cent increase over 1959 (cf. Part IV, Table B.2.1).

Further Developments

The issues involved in further development of the lower and intermediate levels at the Gymnasium are covered in section 5.1.1.

Experiments are in progress in all Länder, aiming at reform of the upper level in the Gymnasium. The emphasis is on intensified orientation of this upper level to the demands of university study and also those vocational demands which are made of school-leavers not going on to university. What is aspired to is a form of upper level in the Gymnasium that is so structured that, on the one hand, all pupils receive a joint basic education, but that, on the other, individual specialisation, according to talent and achievement, is possible.

In practice that signifies a further reduction in the number of compulsory subjects and greater freedom of choice for the pupil (by way, too, of the inclusion of new subjects - including those oriented to the demands of vocational practice - in what is taught), in both the compulsory and the optional subjects.

Experiments in this direction have been under way since the end of the fifties, with an intensification since the Länder Ministers of Education decided on the so-called Saarbrücken Framework Agreement in 1960.

The special forms of the Gymnasium previosuly described constitute one of the outcomes of these numerous experiments. The insights gained in the process have also influenced the work of the German Education Council, and received expression in recommendations "On Re-organisation of Final Qualifications in Secondary Education" and "On the Setting Up of School Experiments with Comprehensive Schools", and also in the "Structural Plan for the Educational System", which incorporated those recommendations.

The Conference of Ministers of Education has now embarked on a first comprehensive practical implementation of the outcomes of various experiments and of conceptual models with an "Agreement on Re-organisation of the Upper Level in Secondary Level II of the Gymnasium", which is just in preparation. In addition, the Länder Ministers of Education undertook - in an agreement dated 27th/28th November, 1969 - to carry out joint school experiments under scholarly supervision in accordance with the German Education Council's recommendation on the setting up of school experiments with comprehensive schools. The Ministers also undertook to issue an initial report on these experiments on 31st October, 1971 (see appendix 18).

5.1.4. Special Forms of General Secondary Schools for the Employed

Preliminary Remark

The increasing esteem accorded to terminal educational qualifications as precondition for entry into many jobs and for entry into higher social positions has resulted in an intensification of the development of certain special forms of secondary education, which are attended by people with a job after the end of their period of compulsory education and, for the most part, after conclusion of vocational training. Their aim is to open up further possibilities of school or vocational education by way of gaining the secondary qualification. What are involved here are the Abendrealschulen, Abendgymnasien, and special institutions for acquiring the university entrance qualification known as Kollegs.

Abendrealschule

Abendrealschulen are part-time schools, which take people with a job up to the Realschule qualification by way of evening courses. They usually incorporate three grades, each providing around 15 hours teaching a week. This teaching usually takes place on three evenings in the week, but can also be on Saturday morning or afternoon. The curriculum at the Abendrealschule is divided up into six month courses. The subjects taught largely correspond to those at the normal form of Realschule.

The leaving certificate is gained (as already described in section 5.1.2) partly through an examination at the end of the third class and partly (without an examination) through having successfully completed the final class.

In 1969, there existed a total of 91 Abendrealschulen in eight Länder, attended by 8,400 people, a quarter of whom were women. In 1968, more than 1,500 participants in such courses gained the Realschule qualification (cf. Part IV, Table B. 5. 1).

Abendgymnasium

Abendgymnasien are part-time schools, and lead people with a job - by way of a course that lasts at least three years - to the equivalent of the Abitur.

The preconditions for acceptance in the Abendgymnasium involve completed vocational training, or at least three years regular employment, and the minimum age of acceptance is 19.

Those studying at an Abendgymnasium must have a job - except during the final year and a half of study.

The Federal Republic's First Law for the Promotion of Individual Studies (Ausbildungsförderungsgesetz), which came into force on 1st July, 1970, provides for promotion of students at Abendgymnasien by way of montly grants of up to DM. 300 (see section 10 for the details).

Before they are accepted in the Abendgymnasium, applicants must attend a pre-course lasting at least six months, in which they are prepared for the Abendgymnasium's special way of setting to work and have an opportunity to test themselves before starting on the three year main course.

There are at least 17 lessons a week. Students in every class have to take German, civics, two foreign languages, mathematics, and physics. The final examination is conducted according to the regulations for the final examination of gymnasium prevailing in the Land concerned, but account is taken of the particular working conditions and the educational tasks prevailing in the Abendgymnasium.

In 1969, there were some 9,400 students (a quarter of them women) at Abendgymnasien, which are to be found in all Länder (Abendrealschulen exist in only 8 Länder). In 1968, around 1,300 people passed the terminal examination (around 1,500 at Abendrealschulen) (cf. Part IV, Table B.5.1).

Institutes for the acquisition of the university-entrance qualification (Kollegs)

Kollegs are full-time schools that take adults, who have completed vocational training or its equivalent, up to the university-entrance qualification by way of a course lasting at least five half-year periods.

The preconditions for acceptance, apart from the vocational training, are an education roughly corresponding to completion of the Realschule course, and a minimum age of 19.

The Kolleg's students are not permitted to have a job during their course, and can receive financial assistance to the same extent and under the same conditions as students at the Abendgymnasium.

The Kolleg's curriculum roughly corresponds to that at the Abendgymnasium, and the number of lessons per week is the same as at the full-time Gymnasium.

The terminal examination is also conducted (with individual variations) according to the regulations valid for the normal form of full-time Gymnasium.

Details about the methodological and didactic organisation of the Kolleg are contained in the Conference of Ministers of Education's recommendation of 7th/8th July, 1965 (appendix 19).

There are Kollegs in all Länder. In 1969, there were 28 such institutions with 5,700 students, some 1,400 of whom were in the process of taking the Abitur. The number of women (15 per cent) was conspicuously lower than at the Abendgymnasien and Abendrealschulen (around 23.5 per cent) (cf. Part IV, Table B.5.1).

5.1.5. Possibilities of gaining the university-entrance qualification without attending a Gymnasium

There is also the possibility of taking the qualifying examination at a school or before an examination commission without being a pupil at a Gymnasium (this apart from gaining such a qualification at the general and vocational secondary schools).

Non-pupils cannot usually take the examination before the time when this would have been possible if they had attended school in the normal way. (Details of the terminal examination for non-pupils are contained in appendix 11).

Acceptance for university studies without the terminal examination is possible for people who are exceptionally talented in a specific sphere, but who were unable for personal reasons, to pass the qualifying examination.

Applicants for acceptance in this way should be 25 years old and, as a rule, not older than 40.

An application must be made to the Ministry of Education in the Land where the university is at which it is intended to study. In this application, at least two people should be named from the sphere of studies aspired to and who know the applicant and are in a position to assess his ability, his achievements, and his educational level.

The Ministry of Education assembles assessments from these referees and other experts, and then decides on acceptance for the examination. A certificate gained in the Quadriga-Funk-Kolleg in a sphere of studies recognised by the Conference of Ministers of Education can also be presented instead of an assessment.

The examination consists of a written and an oral part. The applicant has to write two examination papers under supervision, one of which covers the applicant's chosen subject.

The oral examination takes place in the form of an exchange of views. This takes in the applicant's subject and his general knowledge. A minimum of general knowledge and trained capacity for thought and judgement, penetrating comprehension of intellectual questions, and dexterity in oral and written use of the German language are demanded in all cases.

University and secondary school teachers constitute the examination commission. The chairman is appointed by the Ministry of Education (for further information see appendix 20).

5.1.6. The Schools for Handicapped

Organisation and Development

Schools for bodily, psychically, and mentally hindered children and young people are termed "Schools for Handicapped". These schools involve:

Schools for Backward Children

Schools for the Mentally Hindered

Schools for the Hard of Hearing

Schools for the Totally Deaf

Schools for the Blind

Schools for those with Defective Sight

Schools for the Bodily Handicapped

Schools for the Ill

Schools for those with Speech Defects

Schools for the Behaviourally Disturbed

Schools for Juvenile Delinquents

The organisational forms of these Special Schools vary according to the local situation and the kind of impediment involved. There are individual classes at general schools (Grund- und Hauptschulen), half-day or full-time Schools for Handicapped, boarding schools, and travelling teachers who give lessons at the sick-bed.

The development of the system of Schools for Handicapped in Germany dates from the activities of the Churches and charitable organisations at around the middle of the last century. Many institutions in this sphere of education are today still supported by private sources.

Objectives and Instruction

"The School for Handicapped serves the education and training of children and young people who are capable of education but who cannot - as a result of bodily, mental, psychic, or moral particularities - receive the education and training that is their due within the general schools".(1)

The constitutional right of even a hindered child to an education and training corresponding to his or her nature and capacity to learn is realised in the School for Handicapped.

All these schools operate with the curricula of the general schools (with the exception of the Special Schools for Backward Children and for the Mentally Hindered), but the basic principles and the teaching methods are adapted to the impediment involved.

The Schools for Backward Children operate with special curricula, aiming at making it possible for even these children to lead a self-sufficient existence in the family, society, and job. The Schools for the Mentally Hindered provide for children who are no longer able to follow the lessons in the Schools for Backward Children, but are, all the same, receptive in small groups to simple instruction and training.

Examples of the range of subjects involved and the number of hours spent on individual subjects are presented in the following tables:

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1) Law for the Unification and Organisation of the School System dated 5.5.1964 in the version of 26.7.1968 - § 4, section 9 - Baden-Württemberg.

a) Timetable of Schools for Totally Deaf Children and Young People in Baden-Württemberg as an example of the timetable in a school for Handicapped that operates according to the curricula in the general schools.

b) Timetable of Schools for Backward Children in Lower Saxony, which makes clear the more simple programme at this Special School.

c) Timetable of Schools for Educationally Weak (Mentally Hindered) Children and Young People in Baden-Württemberg, in which the main emphasis is on what is known as practical training for existence, in which the ability to look after onself plays an essential part.

a) Timetable of Schools for Totally Deaf Children and Young People in-Baden-Württemberg

Summary of lessons at the Hauptschule level

Subject	School year									
	5		6		7		8		9	
	B	G	B	G	B	G	B	G	B	G
Religion(1)	4	4	4	4	4	4	4	4	4	4
German	12	12	8	8	8	8	8	8	8	8
Local History and Geography	3	3	–	–	–	–	–	–	–	–
History and Civics	–	–	2	2	2	2	2	2	3	3
Geography	–	–	2	2	2	2	2	2	1	1
Arithmetic and Geometry	6	6	6	6	6	6	6	6	6	6
Physics, Chemistry	–	–	2	2	2	2	2	2	2	2
Biology	–	–	2	2	2	2	2	2	2	2
Physical Education with Rhythmic-music Education	3	3	3	3	3	3	3	3	3	3
Art	2	2	2	2	2	2	2	2	2	2
Handicrafts	3	–	3	–	3	–	3	–	3	–
Textiles	–	3	–	3	–	3	–	3	–	3
Domestic Science	–	–	–	–	–	–	–	3	–	3
Total	33	33	34	34	34	34	34	37	34	37

(1) The number of lessons in religion corresponds to agreements reached with the 4 main Church authorities.

Summary of lessons in group activities

Subject			School year							
	5		6		7		8		9	
	B	G	B	G	B	G	B	G	B	G
Pupils' reading					2	2	2	2	2	2
Physics, Chemistry or Biology			2	2	2	2	2	2	2	2
Photography					2	2	2	2	2	2
Physical Education					2	2	2	2	2	2
Rhythmic-musical education	1	1	2	2	2	2	2	2	2	2
Handicraft	2	2	2	2	2	2	2	2	2	2
Domestic Science							2	–	2	–

(Source: Kultus und Unterricht 22 J 4356 A, No. 20a, 1967)

(b) Timetable of Schools for Backward Children In Lower Saxony

Sphere of instruction	No. of weekly lessons in the classes						
	3	4	5	6	7	8	9
Introductory lessons	22						
Religion (Prot.)	2	3	3	3	3	3	3
(Cath.)	(3)	(4)	(4)	(4)	(4)	(4)	(4)
Mother tongue and practical less.	–	10	10	11	10	10	11
Arithmetic/Geometry	–	5	5	5	6	6	6
Artistic and Technical lessons/Physical Education	–	8	10	11	13	13	12
No. of obligatory lessons for the pupil	24	26	28	30	32	32	32

A possible distribution of lessons between German and subjects related to the everyday:

Groups of subject	3	4	5	6	7	8	9
Mother tongue	–	6	6	6	5	5	5
Environmental studies, Geography, Nature study	–	2	2	3	3	3	3
History, Civics (World of work)	–	2	2	2	2	2	2
Total	–	10	10	11	10	10	11

A possible distribution of lessons between the arts, technical subjects, and physical education:

Groups of subject	3	4	5	6	7	8	9
Music	–	2	2	2	2	2	1
Hobbies, Drawing, Gardening, Needlework, Handicrafts	–	4	6	6	8	8	8
Domestic Science	–	–	–	–	(6)	(6)	(6)
Physical Education	–	2	2	3	3	3	3
Total	–	8	10	11	13	13	12

(Source: Guidelines for Schools for Backward Children in Lower Saxony, 1966)

(c) Timetable of Special Schools for Educationally Weak Children in Baden-Wűrtemberg

Summary of lessons for the lower, intermediate, and upper levels of Sonderschule for educationally weak children and young people with several groups in the individual levels

Subject	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year		8th Year		9th Year	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
	Lower level groups						Intermediate groups						Upper groups					
1. Religious instruction	2		2		2		2		2		2		2		2		2	
2. Practical education																		
Looking after oneself																		
Learning by playing	6		5		4		3		1									
Local History and Geography lessons in the everyday	2		3		3		4		4		4		4		4		4	
Preparation for work																		
Education																		
Handicrafts	2		3		5		5	2	7		8		10		10		10	
Textiles																		
Domestic Science								3		7		8		10		10		10
3. Education in the arts																		
Singing, Music	5		5		5			5	5		5		4		4		4	
Physical Education	5		5		5		5		5	5	5	5	5	5	5	5	5	5
4. Instruction in language, reading, writing, arithmetic	4		4		5		5		6		6		6		6		6	
	1		1		1		2		2		2		2		2		2	
Hours per week together	27		28		30		26		20		19		18		18		18	
divided							5	5	12	12	13	13	15	15	15	15	15	15
Total per pupil	27		28		30		31	31	32	32	32	32	33	33	33	33	33	33

Since teaching in the Sonderschule is, to a large extent, not concerned with individual subjects, the number of lessons set out in the timetable are to be viewed as guidelines for taking individual subjects into account within the overall plan.

(Source: Kultus and Unterricht, 3 Z 4356 A, Special Issue 3, 1968)

Acceptance, Transfers, and Qualifications

An application for acceptance in a School for Handicapped can be made by the person legally responsible for seeing that a child gets an education, or by the school attended by the child who is to be transferred to a School for Handicapped. The decision about whether the child must attend a School for Handicapped is taken on the basis of a statement by the school the child is attending, and of a special assessment by the School Inspectorate together with the medical authorities. The child's legal guardian is also consulted.

Difficulties result not infrequently from a decision in favour of sending a child to a School for Backward Children, an institution that was previously known as the Hilfsschule. The reason for this is that the child's family frequently feels that attendance at such a school is injurious to their reputation. As a rule, children that fail to attain within two years the standards expected of the first year at the Grundschule, or who get two years behind during the first four years at school, would usually be considered for acceptance at a School for Backward Children.

Pupils at a School for Handicapped can be transferred back to the Grundschule or a secondary school, if the necessity for attendance at a School for Handicapped no longer exists.

Pupils at a School for Handicapped, who have completed their compulsory period of full-time education, can - if they have developed satisfactorily - attend the Hauptschule for a voluntary year so as to gain a terminal qualification there.

There are also secondary schools leading beyond the ninth class (Realschulen and Gymnasien) as part of the system of Schools for Handicapped. But there are not enough such schools to cope with various kinds of impediment. Also for handicapped children and juveniles attendance at vocational schools is obligatory.

For obligatory vocational training these children have to attend as far as possible and necessary special institutions for vocational education. Within this field organisation of these institutions varies from single grades within larger part-time vocational schools for not handicapped children over "part-time vocational schools for handicapped" (Sonderberufsschulen) to "protecting workshops" (beschützende Werkstätten) where backward and mentally hindered juveniles are taken care of.

An increase and improvement of corresponding institutions for vocational training for all kinds of handicapped children is aspired for in all the Länder of the Federal Republic.

Number of Pupils and Pupil Mobility

Of about 1,000 pupils at primary schools and Hauptschulen 48 pupils in 1969 (21 in 1961) attended autonomous schools for handicapped as well as grades for handicapped at schools for not handicapped children.

Further Developments

Extension of the system of Schools for Handicapped - and especially an increase in the number of weiterfuehrende Schulen - is viewed as being one of the most urgent problems in the Länder education system in Germany.

The School Committee of the Conference of Ministers of Education and Cultural Affairs is preparing an assessment and a development plan. The German Education Council also intends to add a recommendation on the development of Schools for Handicapped to its Structural Plan for the Education System.

5.2. Vocational Education in the Secondary Sector

Summary

The present system of vocational education in the secondary sector can be outlined as follows:

1. The dual system and training in Berufsfachschulen

a) On-the-job vocational training follows the nine years of schooling at the Grundschule and the Hauptschule. During the three or three and a half year period of training on the basis of an indenture between the employing firm and the trainee or his parents or guardian the apprentice attends the Berufsschule (part-time continuation school) on one or two days a week. This combination of training in undertakings and compulsory vocational school instruction is known as the dual system.

Since the school year 1968/69, the Berufsgrundschule has been introduced in some Länder as an experimental tenth full-time school year to provide a broad basic training within the framework of the appropriate occupational structure (cf. Annex 21).

b) Most of the Berufsfachschulen, which being full-time schools, wholly or partly replace on-the-job training, likewise follow on from the Hauptschule.

(c) Journeymen's examinations (handicraft trades), skilled workers examinations (industrial trades), and office workers examinations (commercial/clerical occupations) are the recognised examinations terminating practical vocational training. In general they form the basis for further vocational training at Fachschulen (e.g. Technikerschulen).

2. Second-level vocational training establishments

The requirement for admission to vocational education establishments of the second level is either a Realschule education or equivalent qualification as well as a course of practical vocational training.

At present, the institutions at this level include academies and senior Fachschulen, whose pupils, if they obtain above-average qualifications, can continue their specialised training at a university. By the beginning of the scholastic year 1971/1972, these will have been converted into Fachhochschulen and thereby completely integrated into the higher education sector. Admission to a Fachhochschule usually follows a two-year course at a Fachoberschule, the requirement for which is Realschule education.

Another group are the so-called higher Berufsfachschulen and Fachschulen which provide a two-year course of vocational training without, as yet, qualifying the student for higher education.

3. Vocational Guidance

Vocational guidance is a special service provided within the educational system. It falls within the competence of the Federal Institute of Labour and is in the hands of the local labour offices. The career guidance departments work as closely as possible with the schools in accordance with specific guidelines. By holding discussions in schools, addressing meetings of parents, giving talks and showing films on various occupations, or through the press and television as well as various publications and exhibitions, these departments are keeping prospective school leavers informed of the various training possibilities, the requirements and prospects of various trades, and what to consider when choosing a profession. The officers concerned spend as much as 90 per cent of their time giving individual advice to young people about to commence a course of vocational training. Some of those seeking guidance are the subject of special reports prepared by the psychological and medical services of the labour offices. Apart from helping school leavers to find the kind of training they want these centres advise them on the various possibilities of gaining assistance for in-firm and in-school training.

Statutory Regulations

1. Vocational education under Länder legislation

According to the constitution of the Federal Republic of Germany, the Basic Law, legislation related to the whole sphere of education, including higher education and the fostering of art and culture in general, is for the most part, and administration entirely, in the hands of the Länder. The new laws introduced on 12th May, 1969 to amend the Basic Law concern vocational education only to the extent that the schools of engineering and some of the higher Fachschulen have been converted into Fachhochschulen. This means that such institutions fall within the general competence of the Federal Government for the "general principles of higher education".

The following fields of vocational education are covered by laws, ordinances and degrees adopted by the Länder:

The structures of vocational education;

Teaching methods, curricula and timetables;

The marking of work, standards, certificates, transfers from one type of school to another, the beginning and end of the scholastic year and inter-term holidays;

The participation of parents and pupils in the organisation of school life;

Salaries, appointments and legal status of teachers;

Teacher training and further training, structure and functions of school administration and inspection;

Finance and building.

As the relevant provisions stem from the same sources of law and the will for sensible co-ordination has always existed, they now represent a uniform basic approach within the Federal Republic with the result that the substance of vocational training is now much the same throughout the country.

2. The Vocational Education Law

The Vocational Education Law, which was enacted on 14th August and became effective on 1st September, 1969, was the culmination of the efforts of half a century to achieve a standard vocational education law.

The Law creates a uniform basis for an adaptive dynamic system of vocational education. Its aim is to enable those undergoing training or already in employment to adapt themselves to changing technological, economic and social conditions and thus have better opportunities for improving their occupational status and their situation in life, and hereby ensures the practical application of the right to vocational training. It provides the framework for wider-ranging vocational education schemes leading to appropriate qualifications and catering for inter-occupational mobility, for further training enabling the beneficiaries to keep abreast of developments in their respective fields of employment, and opportunities for advancement and retraining. These objectives - vocational training, further training as a means of adaptation and advancement, and retraining, are regarded as interlocked, co-ordinated parts of the vocational education process.

The Law affirms the dual system of on-the-job and vocational school training, and has accordingly adapted it to the situation in society and in industry. On constitutional grounds, owing to the fact that education and culture fall within the competence of the Länder, it was not possible to incorporate purely in-school vocational training in the Law.

The main improvements brought about by the Law are:

1. It has made for legal uniformity, replacing regulations governing the rights and obligations of the parties to indentures, some of which stem from the past century, by provisions which meet the recognised requirements of labour legislation in this modern age.

2. The Law applies equally to all branches of industry and to all trades, with the exception of civil service and merchant marine training. Taking into account the existing regulations governing handicrafts, it contains special provisions relating to vocational training in this sphere, entitlement to such training, and to examinations and inspection.

3. The Vocational Education Law embraces not only basic but also further vocational training, retraining, the training of the physically handicapped, as well as vocational training by correspondence.

Courses of training must be broad-based and impart the special knowledge and skills which participants need for their chosen trade. They must at the same time enable pupils to acquire the necessary professional experience. The purpose of further vocational training is to consolidate the skills and knowledge already acquired, to extend them or adjust them to technical developments, and to provide the qualifications for occupational advancement. Retraining courses are intended to enable participants to acquire the skills for other trades.

4. The Law explicitly requires teachers and instructors to have the necessary personal and professional qualifications and training establishments to be of an appropriate standard. Generally binding regulations governing training, further training and retraining are envisaged which will embrace the substance, progress and objectives of vocational education. Persons under the age of 18 may only be trained for recognised apprenticeship trades. The Law states that vocational training shall be the responsibility of the "appropriate authorities" (e.g. chambers of industry and commerce, handicrafts and agriculture) who must supervise training, for which purpose they have qualified training consultants with far-reaching powers.

5. Employee participation in the firm's affairs will also embrace the field of vocational training. A Federal Vocational Education Committee is to be appointed consisting of representatives of employers, employees, the Land authorities and a representative of the Federal Institute of Labour. The Committee's task will be to advise the Federal Government on questions of vocational education policy.

Similar committees will be set up at Land level with the same number of representatives of employers, employees and the supreme regional authorities, with the task of advising the Land governments. In both the Federal Committee and the Land committees some of the representatives of the public authorities must be experts on education. The bodies responsible for the implementation of vocational training (chambers of industry and commerce, handicrafts and agriculture, etc.) will set up vocational education committees comprising six employers' and six employees' representatives, as well as six vocational school teachers. The committee shall be informed and consulted on all important matters concerning vocational education. It must in particular draw up the regulations for the implementation of vocational education which the appropriate authority must issue pursuant to the Vocational Education Law.

6. Under the Vocational Education Law, a Federal Institute for Vocational Education Research has been established as a public corporation in Berlin. Its finances are covered by federal budget appropriations and its task is to define the foundations of vocational training, to determine the contents and objectives of such training, and to prepare for the adaptation of this sector of education to technological, economic and social developments. Members of the Institute are the central organisations of industry, the trade unions and the Federal Ministry of Labour and Social Affairs and the Federal Ministry of Economics. The Vocational Education Law is supplemented by the Labour Promotion Law and the Training Promotion Law insofar as these two laws provide the financial basis for vocational training aimed at higher qualifications.

5.2.1. The dual system

5.2.1.1. Training in undertakings

1. The dual system and the Vocational Education Law

More than half of all school leavers embark on a course of practical training with a firm after leaving school. Nearly all boys and a large proportion of girls who do not take a full-time course of secondary education, or discontinue it, become apprentices. This applies to over 90 per cent of male pupils at vocational schools and nearly 75 per cent of girl pupils. The Vocational Education Law, which establishes the whole legal framework for in-firm vocational training, explicitly identifies itself with the dual system. The advantage of this system is that training is closely related to practice and thus ensures a rapid adaptation to technical and economic developments. There are, however, considerable differences in the standards of training provided. Although the training afforded by some firms is open to criticism, there are many enterprises in all branches of industry and of all sizes whose training is exemplary.

There can be no doubt that the greater part of vocational training will continue to be provided within the framework of the dual system but in addition there will be more full-time vocational schools which will take on part of the task, initially in sectors that are best suited for this or in which it is necessary for the sake of the pupils, where necessary alternating between full-time school instruction and practical training. In its Educational Structural Plan adopted on 13th February, 1970, the German Educational Council stated the following: "As technical developments have greatly changed vocational requirements in many sectors of industry, the dual system alone is no longer adequate to meet the needs of some occupations. This is not to say, however, that apprenticeship training should now be superseded altogether by full-time schooling. Nor it is certain that practical training at school is from the outset better than on-the-job apprenticeship. In fact, the opposite can quite easily be the case, particularly as there is a shortage of public funds for extending school training and there is no guarantee that school equipment and curricula are such as to keep pace with modern technical developments."

2. Apprenticeship trades

The Vocational Education Law provides that young people under the age of 18 may only be trained for recognised trades. These are stipulated by the appropriate ministries in agreement with the Federal Ministry of Labour and Social Affairs in ordinances and these departments issue the appropriate training regulations. At present, the 513 trades and the appropriate definitions, training programmes and examination regulations that were recognised before the Vocational Education Law came into force, still apply.

Over half of the 1.3 million persons undergoing training in 1969 were seeking qualifications for commercial trades, 413,000 for handicraft trades, about 246,000 for industrial occupations and over 30,000 for jobs with the postal and railway authorities and similar institutions.

In many instances training for the same or a similar industrial occupation can be given in handicraft and industrial enterprises. Approximately 275,000 girls and nearly 200,000 boys serve apprenticeships with commercial and industrial establishments for administrative, office and other clerical occupations. In addition, there are 22,000, or 20,000 of them girls, serving apprenticeships as bakers, confectioners, butchers, shop assistants and clerks, as well as 8,700 girls training to be chemist's assistants and another 15,000 as office workers with legal firms.

Another 46,000 or so are learning agricultural trades and about 7,000 housecraft. 30,000 girls want to be doctor's or dentists's assistants.

Male trainees in selected occupational groups

(as of 31st December, 1969)

Smiths, fitters, mechanics, metalmakers and metalworkers, allied occupations	254,649
of which:	
motor mechanics	77,575
machinists	39,360
tool-makers	22,662
plumbers	16,137
locksmiths	11,434
fitters	11,402
agricultural mechanics	11,015
Commercial occupations, clerical and office jobs	176,076
of which:	
industrial clerks	40,435
clerks and assistants in wholesale and export firms	38,333
shop assistants	35,527
bank and insurance clerks	31,273
filling station attendants	6,375
Electricians	122,651
Building trades	57,801
of which:	
painters and sprayers	26,144
bricklayers	17,425
Food, drink and beverage manufacturers	48,394
Agricultural workers, animal breeders, gardeners	34,296
of which:	
farmers	27,216
gardeners	5,329
Woodworking and allied occupations	22,601
Draftsmen, tracers, building draftsmen	17,016
Photographers, printers and allied occupations	15,054

Female apprentices in selected occupational groups

(31st December, 1969)

Commercial trades, clerical and office jobs	275,934
of which:	
shop assistants	112,703
Hairdressers	52,200
Textile manufacturers and processers	19,524

The above tables indicate a clear concentration on certain apprenticeship trades. A breakdown into 25 occupational categories shows that almost two thirds of all apprentices fall into only 5 of them. 77 per cent of male apprentices are covered by 30 occupations, whilst in the case of girls the concentration is much stronger.

3. Indentures

Under the new legislation, indentures strictly serve the purpose of training in the interest of the persons concerned, all other aspects of the apprenticeship being of secondary importance. The indenture must be drawn up in writing and must indicate: the occupation for which training is to be given; the duration of vocational training as laid down in the appropriate regulations; a detailed breakdown of the various phases of training; the parts of the training course to be conducted outside the training establishment; the daily amount of training; wages and holidays, the minimum rates for which are in most cases laid down in the collective wage agreements or in the Law for the Protection of Youth. The establishment providing the training may not assign apprentices to work that does not serve the purpose of training, nor prevent them from attending a vocational school, other instruction outside the establishment, nor from examinations. Every year about 5 to 6 per cent of all indentures are discounted. Many of the apprentices concerned resume training either in a different locality or in another occupation. In any event, there are far fewer drop-outs than in the case of pupils of the same age groups in secondary schools.

4. Training Regulations

The training regulations must at least determine:

- the designation of the apprenticeship trade,
- the duration of training; maximum 3 years, minimum 2 years,
- the skills and knowledge required (definition of trade),
- the classification of those skills and knowledge and the timetable (general training scheme),
- the examination requirements.

In other words, the training regulations determine the content and duration of training in undertakings. They should also stipulate the minimum requirements of training establishments as regards equipment and personnel, and may require apprentices to keep report books so that a continuous check can be kept on the progress of training (specimen training regulations, see Annex 22).

The task of reforming training regulations was commenced some time ago. They require thorough preparation, which is one of the chief responsibilities of the newly established Federal Institute for Vocational Training Research.

5. New Forms of Training

(a) Phased training

Various phased training models have been tried out since 1948. The main advantages of such a system are:

- the trainee can postpone the final choice of occupation from the beginning of the course of training to near the end of the first phase of training;
- increased horizontal and vertical permeability of occupations which require the same or similar basic training;
- future skilled workers will have greater occupational mobility which will make it easier to meet the growing demands of industry and to provide more extensive social security.

The Vocational Education Law has made allowance for this development and it is now possible to determine the training regulations and the curricula and timetables for the consecutive phases of basic general and specialised vocational training. The first regulations relating to phased training on the basis of the Vocational Education Law will be issued shortly, e.g. for the Clothing Industry (see Annex 23) and for the Electrical Trade.

Even before the Law came into effect official recognition had already been given to a phased course of training for shop assistants/retail salesmen, as well as regulations governing phased training for textile processors. In the case of shop assistants, apprentices can either terminate their course of training after two years, taking the shop assistants' examination, or continue for a third year ending with the examination for retail salesmen.

Under the regulations governing phased training for textile processors, those who have successfully completed the two-year course of basic training, the initial phase, can either take up the appropriate occupation or enter the second phase which comprises a further twelve months' training qualifying participants as dyers, printers or finishers.

(b) Central training

The larger firms invest considerable sums in their own training workshops of which there are over 2,000 in German industry with a total capacity of 100,000 requiring some 10,000 full-time instructors. Most of them are in the iron and metal working industries but there are a growing number in other branches.

Training in small undertakings frequently requires supplementary practical and theoretical instruction at central establishments. The various industrial organisations have been offering this kind of facility for some time and at present there are about 40 such establishments. Some of the big enterprises take in apprentices from smaller firms for their basic vocational training, while others provide part of the training against payment where such undertakings do not have the appropriate facilities or enough instructors.

The handicraft organisations maintain trade-sponsoring institutions, joint workshops and classrooms, where central supplementary courses are held for apprentices. In 1966, roughly 1,400 such establishments gave additional theoretical and in some cases practical training to more than 100,000 participants. Commercial enterprises also provide such central supplementary training.

The need for training in undertakings to be supplemented by further instruction of this kind may be specifically laid down in the training regulations for the trade concerned. Where such courses of training at central establishments are run by the chambers, district handicraft associations, guilds, employers' and employees' organisations, professional associations, groups and associations of enterprises, local authorities and their associations, foundations, clubs and other such bodies, they may qualify for financial support under the Labour Promotion Law which came into effect on 1st July, 1969. The Federal Institute of Labour can give under that Law and the "Order regarding Institutional Assistance" issued by its Administrative Board on 31st October, 1969 loans and grants for the establishment, extension and equipment of institutions of vocational education. In exceptional cases grants may be given for the maintenance of the establishment and for preparatory measures (e.g. the drawing up of courses and programmes, development of methods and the preparation of work letters for correspondence courses).

Eligible for assistance are central establishments providing vocational, further and retraining courses. Institutions serving vocational training in continuation schools or predominantly a particular undertaking or association or commercial purposes, do not qualify for such assistance. Where there is an urgent need, the Federal Institute may establish institutions and model centres either of its own accord or jointly with other sponsors. One of these model centres is the Berufsförderungszentrum in Essen which has been partly financed by the Government of North Rhine-Westphalia, the Federal Government, and the city of Essen. The centre has been set up for the purpose of developing progressive training methods, vocational training programmes for adults, and examinations procedures suited to adult needs. The centre was opened in January 1971. The Federal Institute was allotted DM. 110 million for such assistance measures in 1970 and 1971. In addition, the Federal Ministry of Economics provides under its scheme for the restructuring of small and medium-sized enterprises funds for the establishment and extension of training centres for handicraft trades, commercial, hotel and restaurant trades.

6. Teaching and specialist qualifications of instructors

Under the provisions of the Vocational Education Law, instructors in charge of training in undertakings must have the necessary personal and technical qualifications. Thus a person who has been denied his civil rights and not allowed to take charge of children or young people, or anyone who has repeatedly or seriously violated the Vocational Education Law, is deemed to be unsuitable. An instructor is generally considered to have the necessary qualifications if he has passed the final examination in the field of training in which he is to give instruction.

Instructors in handicraft trades must have obtained their master's certificate, known as the "senior qualification". Similar special regulations apply to housecraft, for instance, as well as to agricultural and printing trades. In the industrial sector, instructors receive initial and advanced training under a scheme (comprising seminars and working groups, etc.) devised by the chambers of industry and commerce in conjunction with the Association of Chambers of Industry and Commerce with the aim of equipping participants with the essentials of teaching methods. Most of these events are of short duration, are non-compulsory, and do not end with an examination. Generally it is left to the firms themselves to appoint as full-time or part-time instructors experienced skilled workers who have the necessary qualifications under the Vocational Education Law and who, in some cases, have obtained their master's or technician's certificate.

In the handicraft trades, one main section of the master's certificate examination is concerned exclusively with vocational teaching methods. Candidates for the examination must either have taken part-time courses over several years organised by the chambers of handicrafts and the guilds, or full-time courses of instruction at Fachschulen of between four months' and two years' duration.

Under the Vocational Education Law, the Federal Government is entitled to issue ordinances requiring instructors to acquire knowledge of vocational teaching methods or additional technical knowledge, and at the same time to specify the content and scope of the measures involved and the final examination. These ordinances are at present under consideration.

7. Examinations

Examinations are an important means of verifying the success of training. The interim examination, which must be set at least once during the course of training pursuant to law, is an obvious means of keeping check on the progress made.

Successful examinees do not as a rule derive any direct privileges and a particular trade is not reserved exclusively to those who have completed their vocational training. In practice, persons wishing to enter a particular trade must usually have obtained their journeyman's certificate, their skilled worker's certificate, or an office worker's certificate. These qualifications also make a difference to their pay, of course. Examination procedures are the responsibility of the chambers and other competent authorities which issue the examination regulations in accordance with the guidelines drawn up by the Federal Committee for Vocational Training. The conditions of admission to examinations are partly governed by the Law and partly by the examination regulations. In individual cases the chamber or other competent authority will decide on the persons to be admitted.

In all there are more than 10,000 examining committees. They usually consist of an equal number of representatives of employers and employees, whilst those for handicraft trades have an equal number of master craftsmen and journeymen. They account for at least two thirds of all members. At least one vocational school teacher must be on each committee.

Examinees may repeat their final examination twice. In 1967, the proportion of failures in the examinations for industrial skilled workers was 10.2 per cent, journeymen in handicraft trades 12.8 per cent, and office workers 17.7 per cent. These figures compare favourably with the percentages of failures in school and university examinations. In 1969, a total of 464,000 final trade examinations were taken, 97,000 were industrial skilled workers' examinations, 213,000 commercial/clerical examinations, and 154,000 journeymen's examinations for handicraft trades.

8. The cost of vocational training in undertakings

The greater proportion of the costs of on-the-job training is borne by the firms concerned. To this must be added the expenditure incurred by the public authorities, the industrial organisations, the people working in an honorary capacity, and the apprentices themselves and their parents.

In its recommendation of 1969 calling for an improvement in apprentice training, the German Education Council started from the assumption that new methods of financing would be required and suggested the following alternatives:

- All vocational training to be financed by the state; in other words from tax revenue;
- retention of the present system whereby the costs are shared by all enterprises deriving benefit from the training;
- a mixed system whereby the greater proportion would be financed by the private sector with the government providing grants. In its 1970 Report on Education, the Federal Government accepted the models proposed by the Education Council as a suitable basis for discussion. However, it will not be possible to modify the financing system until the whole question of the cost of vocational training in undertakings in different trades and branches of the economy has been thoroughly studied. This study will shortly be carried out by an independent committee of experts appointed by virtue of a decision of the German Bundestag. In addition, the Federal Committee on Vocational Training and the Federal Institute for Vocational Education Research will turn their attention to the problem of finance, whilst the report on the promotion of vocational training, which the Federal Government, through the Federal Institute of Labour, is required to submit to parliament by 31st December, 1972 pursuant to Section 239 of the Labour Promotion Law, will provide further information on the question of finance.

5.2.1.2. The Berufsschule

1. Functions and organisation

Berufsschulen are part-time continuation schools which are compulsory for young people undergoing apprentice training. Their function is to extend pupils' general education, taking into account their vocational training or occupations, and to supplement practical training. In exceptional cases the education authority may permit such schools to give full-time instruction in connected periods instead of part-time instruction (Group Designations in Vocational Education, decision of the Conference of Ministers of Education dated 18th January, 1968). It is the joint task of all Berufsschulen to widen pupils' general education in the light of the occupation for which they are being trained. But in order to supplement practical vocational training these schools must be divided into different categories depending on the type of training they provide, e.g.

mining,

industry,

housecraft,

commerce,

agriculture and horticulture,

mixed occupations,

vocational school for handicapped.

The degree of differentiation depends on population density and on the industries to be catered for. Great efforts are being made in the Länder to enable pupils in the same occupation to be taught together in specialised classes. In addition, there are many independent schools catering partial sectors (e.g. schools for metal working or electrical trades). Where there are not enough pupils to form specialised classes they are drawn from wider areas so that there may be district classes or even specialised classes for children from all over a particular Land. If the number of trainees for any particular occupation is very small, they are trained in central Berufsschulen which cater for a Land or for the whole country. Instruction at such schools is usually full-time.

2. Aims and Curricula of the Berufsschulen

The Berufsschule is a part-time continuation school organised on the three-class system. Pupils attend on one or two days a week and receive up to twelve hours instruction a week during the three to three-and-a-half-year period of training.

General subjects

Practically all Berufsschulen in German teach the following general subjects: German, social studies (often referred to as Bürgerkunde, Sozialkunde or Politische Bildung), economic studies, religion. In some cases social and economic studies are combined. In commercial Berufsschulen economic studies is a specialised subject. German receives special emphasis. Approximately 40 per cent of all instruction is devoted to general subjects. Instruction at Berufsschulen is determined by the curricula which are issued by the Ministries of Education of the respective Länder (cf. Annex 24).

Theoretical technical instruction

The curricula for specialised subjects issued by the Ministries of Education conform to the training regulations prepared by the Federal Institute for Vocational Education Research (previously: the Centre for In-service Vocational Training, Bonn) and issued by the minister concerned in agreement with the Federal Minister of Labour and Social Affairs for the whole of the Federal Republic in the form of ordinances. An extract from the curricula for industrial and clerical trades at Berufsschulen, which gives an idea of the content, organisation and planning of specialised instruction at commercial Berufsschulen in North Rhine-Westphalia but can be regarded as typical for all Berufsschulen, is attached as Annex 25.

3. Certificates and qualifications

Berufsschule pupils are awarded a final certificate, usually without any particular examination. Those intending to embark on more advanced training at Fachschulen require this certificate together with the certificate awarded upon completion of training in an undertaking.

4. Statistics

In 1950, there were in the Federal Republic of Germany (excluding the Saarland)

6,767 Berufsschulen with

1,699,300 pupils in

66,939 classes averaging 26 pupils.

In subsequent years the number of Berufsschulen decreased so sharply (despite the inclusion of the Saarland) that in 1968 there were

1,799 Berufsschulen with

1,754,765 pupils divided into

75,800 classes averaging

23 pupils per class.

Between 1950 and 1968 the number of full-time teachers at Berufsschulen rose from 15,631 (1950 excluding the Saarland) to 24,964 (1968 including the Saarland). Accordingly, whereas in 1950 there were 113 pupils to every full-time teacher, this number fell to 70 in 1968.

There was a parallel trend in the formation of specialised classes. In 1968, 80 per cent of all pupils at Berufsschulen were receiving instruction in such groups. These figures show that the once small vocational school with about 250 pupils has been steadily replaced by establishments which can take up to 1,000 pupils. The advantage here is that large schools can organise the necessary specialised classes. Furthermore, specialisation has meant more rationalisation. This is shown by the fact that better use is now made of extremely expensive buildings and equipment and teachers can now concentrate on their specialised subjects, which they could not do to the same extent previously.

These improvements mean that pupils have farther to travel but they have been made possible by the extension and reorganisation of densely populated areas. The significance of the Berufsschule in the educational system of the Federal Republic is indicated by the percentages of the various age groups attending them. In 1967:

approximately 45 per cent of all 15-16 year olds,

approximately 63 per cent of all 16-17 year olds,

approximately 53 per cent of all 17-18 year olds, and

approximately 25 per cent of all 18-19 year olds,

attended Berufsschulen. Of these, about 80 per cent underwent training with undertakings.

5.2.2. Full-time vocational training

5.2.2.1. The Berufsfachschule

Functions and organisation

"Berufsfachschulen provide daily instruction which, without requiring a course of practical vocational training as a condition of entry, prepares pupils for their future occupations or serves as the basis for further vocational training and aims to enhance their general education. Courses last at least twelve months". (Group Designation in Vocational Education, decision taken by the Conference of Ministers of Education, on 18th January, 1968). The various types of Berufsfachschulen covered by this designation can be classified according to the following criteria:

1. branches of industry or occupations(1)(2),
2. (school) conditions of admission,
3. extent to which the period of instruction at the Berufsfachschule is deducted from the period of practical training with an undertaking,
4. the school leaving certificate.

The following table is broken down according to these criteria and indicates the percentage distribution of male and female pupils at the various types of Berufsfachschulen.

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1) See page 95 : Berufsfachschulen, survey according to branches of industry or occupations.

2) The length of courses is between one and four years.

Percentage distribution of pupils among the various types of Berufsfachschulen(1)

branch of industry or occupation 1. conditions of admission 2. extend counted towards training in undertakings 3. leaving certificate	Berufsfachschulen				
	clerical and commercial %	industrial and technical %	housecraft, nursing, social welfare %	other occupations (agriculture, horticulture, crafts, artisan trades, technical assistants) %	%
1. Hauptschule 2. about 50 per cent counts 3. no Fachschulreife or equivalent	1	2	7	-	10
1. Hauptschule 2. all counts 3. no Fachschulreife or equivalent	7	0.5	10	0.5	18
1. Hauptschule 2. about 50 per cent counts 3. no Fachschulreife or equivalent	36	5	5	-	46
1. Hauptschule 2. all counts 3. Fachschulreife or equivalent	5	-	5	-	10
1. Fachschulreife or equivalent 2. all counts	4	-	-	-	4
1. Fachschulreife or equivalent 2. all counts	5	-	5	2	12
Total	57	8	32	5	100

(1) **Source**: Unpublished results of enquiries with Ministries of Education (as of 1969)

This table shows that the type of Berufsfachschule which is the continuation school for pupils leaving the Hauptschule and provides courses of instruction that are partly deducted from the time spent undergoing training in undertakings, leads to a Fachschulreife or equivalent(1) for the largest proportion of all young people, male and female, attending Berufsfachschulen (about 46 per cent). It also shows that more than half of this proportion attend the commercial/clerical type. Of these the Handelsschule, which provide two-year courses of training following on from the Hauptschule, half of which is deducted from the course of practical training and leads to a qualification mentioned above, is the one most preferred.

Curricula of the various types of Berufsfachschule

The following timetables of a few representative Berufsfachschulen are reproduced to indicate the type of curriculum: timetable of a technical trade Berufsfachschule attended by pupils who have completed their education at the Hauptschule. Part of the course is deducted from the period of training in undertakings. The course does not lead to a qualification mentioned above.

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1) Intermediate certificates are those awarded by the Realschule and qualifying for the Fachschule. The certificate qualifying for the Fachscule was designed to complete the course at the Berufsaufbauschule (vide) and is also awarded by Berufsfachschulen.

Timetable of theoretical instruction(1) for metal-work trades(2)

Subject	Hours per week
Religion	1
Social studies	1
German	1
Economics	1
Specialised subjects:	
knowledge of materials	
working methods	2
Arithmetic	2
Applied geometry	1
Technical drawing	2
Physical education	1
Total	12
Practical work in specialised subjects	(2)

1) A further 28 hours per week are devoted to practical instruction in workshops.

2) Source:

"Schul- und Hochschulverzeichnis", catalogue of secondary schools and universities in the Länder, published by Klaus Szameitat and Hans-K. Kullmer, Verlag Anton Hain, Meisenheim am Glan, 1968, p. 540.

Timetable for a Berufsfachschule (housecraft),
likewise following on from the Hauptschule.
The whole course is counted as part of
training with an undertaking.
No Fachschulreife or equivalent(1)

Subject	Hours per week
I. German	2
Civics	2
Religion(2)	
Teaching and infant care	2
Arithmetic and book-keeping	2
Health care	2
Nursing and baby care	2
II. Cooking, foodstuffs, dietetics	9
Cleaning, washing, etc., gardening, flower cultivation	4
Handwork	7
Singing and gymnastics	2
Total	32
III. Group work:	
1. English or a subject chosen from section I	2
2. House tasks chosen from section II	2
Total	36

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1) Source: "Schul-undHochschulverzeichnis", catalogue of secondary schools and universities in the Länder, published by Klaus Szameitat and Hans-K. Kullmer, Verlag Anton Hain, Meisenheim am Glan, 1968.

2) Fortnightly one hour from section I.

Timetable of a commercial/clerical Berufsfachschule (two-year Handelsschule) following on from the Hauptschule. Part of the course is deducted from the period of training in undertakings; intermediate certificates are awarded.

Timetable for the two-year course at a commercial/clerical Berufsfachschule(1)

Subject	Hours per week	
	first year	second year
General subjects		
German	4	3
English	4	5
Social studies, history	2	2
Geography	1	1
Religion	2	2
Mathematics and science subjects		
Mathematics	5	4
Physics	1	1
Chemistry	1	1
Basic occupational theory, practical training		
Economic and business correspondence, book-keeping and clerical work	6	7
Typing and office techniques	6	5
Physical education	2	2
Total	34	33
Voluntary group work		
(to improve performance; subjects of interests)	4	4

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1) Source: "Schul- und Hochschulverzeichnis", catalogue of secondary schools and universities in the Länder, published by Klaus Szameitat and Hans K. Kullmer, 1968, Meisenheim am Glan, p. 486.

The timetable for the commercial/clerical Berufsfachschule meets the requirements for the intermediate examination by offering English as a compulsory subject for four or five hours a week in both years, and in addition devotes the same amount of time to general subjects as the Realschule (see 5.1.2.) and the Berufsaufbauschule (see 5.2.3.1). Time-table of a Berufsfachschule following on from the Realschule and offering a complete course of vocational training:

Training regulations(1) for laboratory assistants(2)

Subject	Total number of hours
Theoretical part	
German	80
Economic and social studies	100
Mathematics and technical arithmetic	340
Physics	400
Physical chemistry and nuclear physics	140
Chemistry	120
Materials and operating techniques	100
Electrotechnology	160
Technical drawing	100
Optional subject: (a) English (b) Alternative technical subject	(200)

1) The course lasts four semesters, each averaging 20 weeks of between 35 and 40 hours a week.

2) Source: "Schul-und Hochschulverzeichnis", catalogue of secondary schools and universities in the Länder, published by Klaus Szameitat and Hans K. Kullmer, 1968, Meisenheim am Glan, p. 311.

Subject	Total number of hours
Practical part	
Practical work in physics	520
Practical work in electrotechnology	220
Practical work in chemistry	120
Practical work in physical chemistry, nuclear physics	160
Workshop training	260
Optional subject	(180)

Berufsfachschulen according to industrial and occupational branches

Clerical/commercial Berufsfachschulen, e.g.:

Commercial schools
Economic schools
Senior commercial schools

Industrial and technical Berufsschulen, e.g.:

Metalworking trades
Motor mechanics
Watchmakers
Draftsmen
Radio and television engineering
Electrical engineering
Building trades
Cartographers
Textile and clothing trades
Hotel and restaurant trades

Berufsfachschulen for housecraft, nursing and social welfare trades, eg.

Housecraft
Rural household management
Occupations for women (Frauenfachschulen)
Occupations for women in rural areas (Landfrauenschulen)
Preparatory schools for health visitors
Nursing schools
Child care
Infant school teachers
Social welfare occupations

Berufsfachschulen for rural engineering
Berufsfachschulen for horticulture
Berufsfachschulen for artisan trades, crafts, e.g.

Photography
Ceramics
Wood-carving and wood sculpture
Goldsmiths and silversmiths
Glass and porcelain painting, fashion jewellery
Violin builders
Music and ballet
Berufsfachschulen for translators and industrial foreign language correspondents
Berufsfachschulen for laboratory assistants

5.2.2.2. The Berufsaufbauschulen

Berufsaufbauschulen are schools that are attended after at least six months attendance at a Berufsschule apart from these or after completed Berufsschule attendance by young people who are or have been undergoing vocational training or are or have been employed. The Berufsaufbauschulen provide a general or subject-oriented education going beyond the objectives of the vocational school. The course of education lasts at least one school year with daily instruction, or lasts longer where lessons are given only on individual school days. (Resolution by the Kultusministerkonferenz of 18th January, 1968 "Group Designations in the Vocational Education System").

Up to now the Kultusministerkonferenz has passed two general agreements (24th-25th September, 1959, and 4th February, 1965) on the establishment of Berufsaufbauschulen (Aufbaulehrgänge) in the vocational education school system. The rapid development of the Berufsaufbauschulen since the conclusion of the first general agreement made the second general agreement, with additional agreements, essential. The resolution by the Kultusministerkonferenz of 28th November, 1960 in the version dated 14th September, 1966 regulates in a special general ruling the examination to test Fachschule maturity for Berufsaufbauschulen (Aufbaulehrgänge) in the vocational education school system - technical subjects. This general examination ruling is being redrafted at present with the aim of unifying it for all subjects at the Berufsaufbauschulen.

Through the establishment of Fachoberschulen, new conditions have arisen which make necessary the adaptation of Berufsaufbauschulen. In this sense and with this in mind, approval was given by the Kultusministerkonferenz of 18th March, 1970 to the "Recommendations for Instruction at Berufsaufbauschulen".

The Work of the Berufsaufbauschule

1. The Berufsaufbauschule should enable its pupils

   a) to take on difficult jobs and greater responsibility in professional life;

   b) to rise to positions or jobs the precondition for which is a Realschule leaving examination or an examination of equal value; and

   c) to enter Fachoberschulen, Akademien (Höhere Fachschule or Kollegen.

2. By attendance at a Berufsaufbauschule, young people should be promoted to an extent that they achieve personal maturity appropriate to their talent, age and vocational and personal experience and that they are in a position to master the differentiated demands of a modern, efficient society. Part of this is a willingness to understand cultural and social-policy problems.

3. The Berufsaufbauschule therefore has a particular task in deepening the pupils' existing knowledge and views and expanding their horizons. At the same time, young people should be led from thought processes based on specific situations or aims to abstract thinking and to independent intellectual activity and the ability to form judgements.

4. The Berufsaufbauschule should promote and encourage willingness and the ability to learn further. Further education holds open future possibilities of development for young people and places them in a position to meet the changing demands in technology, industry and society.

Breakdown, Forms of Organisation and Duration of the Berufsaufbauschulen

The Berufsaufbauschule can be broken down into the following sub-divisions:

1. general technical subjects,
2. industrial-technical subjects,
3. sales and clerical,
4. domestic science and social educatiional,
5. agricultural subjects.

In all subjects at the Berufsaufbauschulen, pupils are taught at the same time German, foreign languages, history with community relations, geography with economic geography as the cultural and social group of subjects, and mathematics, physics and chemistry as the mathematical and natural science group of subjects. In the vocational group of subjects, economics and industrial management are taught in all subjects and in addition a subject typical for the vocation in every branch of instruction:

1. draughting in general industrial subjects,
2. technical draughtsmanship with geometry in the industrial-technical subjects,

3. biology and health and hygiene in the domestic science and social educational group of subjects,

4. managerial accountancy in the sales and clerical subjects, and

5. biology in the agricultural subjects.

According to the valid Länder regulations covering the administration of instruction, other subjects such as physical education, music, handicrafts and religion are also taught.

Instruction at Berufsaufbauschulen is given at Berufsschulen. One differentiates between full-time schools, part-time schools giving evening or weekend classes, and schools which begin as full-time schools and end as part-time schools or vice versa.

Berufsaufbauschulen in full-time form last two half-years, in part-time form six half-years, and in the mixed form three part-time half-years and a full-time half-year. The total educational course lasts at least 1,300 hours.

The Fachschulreife

The educational course at the Berufsaufbauschule ends with the examination: the so-called Fachschulreife.

The Fachschulreife qualification gives a pupil access to positions of higher responsibility in working life. Young people in possession of the Fachschulreife qualification fulfil, according to the subjects studied, the basic qualification for admission to the Ingenieurschulen, Fachschulen and Hörere Fachschulen, Technische Oberschulen and Gymnasien, which lead on to university maturity (Hochschulreife) in a specific subject. In addition, a young person having the Fachschulreife qualification fulfils in principle and independent of his subject the preconditions for admission to a Kolleg (institutes where Hochschulreife can be attained).

Because the attainment in the examination subjects, taking into consideration the realities conditioned by the vocation, should accord with the demands of the Realschule final qualification (see V,1 of the General Agreement of 24th-25th September, 1959), the examination qualification of the Berufsaufbauschule courses provide a right to the Realschule final qualifications. (Second General Agreement on the Berufsaufbauschule, Resolution of the Kultusministerkonferenz of 4th February, 1965).

With the establishment of the Fachhochschulen, the right of admission for this sector gained with the Fachschulreife is valid only conditionally for the duration of a transitional period. (See 8.3.2.)

After the conclusion of this period, the Fachschulreife only provides a right of admission to educational courses that lead to the Fachhochschulreife.

5.2.2.5. The Fachoberschule

Structure and Instruction at the Fachoberschule

On 31st October, 1968, the Ministers President of the Länder concluded the "Agreement between the Länder of the Federal Republic on Uniformity in the School System".

Article 15 of this agreement foresees that the Länder governments immediately take the necessary measures to implement the agreement. The change from Höhere Fachschulen to Fachoberschulen was to follow as soon as the preconditions laid down in this agreement are fulfilled. One of these preconditions is the Fachhochsculreife, established by the Agreement, which provides the right of entrance to the Fachhochschule.

With the supplementary agreement to the Hamburg Agreement(1), the Fachoberschule was introduced as a new type of school with effect from 31st October, 1968. This school embraced Classes 11 and 12 and on completion of Class 12 led to the Fachhochschulreife.

On the basis of this agreement, the Kultusministerkonferenz concluded the "General Agreement on the Fachoberschule" on 6th February, 1969 (Addendum 26).

The precondition for entrance to the Fachoberschule is the conclusion of the Realschule or the possession of an equally recognised education certificate. Pupils in possession of the Fachschulreife (or Realschule-leavers with a vocational education certificate) can be accepted directly into the second year (Class 12). In this way, account is taken of vocational education documented by the Fachschulreife certificate.

The "General Agreement on the Fachoberschule" foresees Fachoberschulen with subjects in the engineering sector and Fachoberschulen with economics subjects. The agreement permits

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1) Agreement on a supplement of the agreement between the Länder of the Federal Republic on the Uniformity of School Education of 28th October, 1964 (Hamburg Agreement) of 31st October, 1968 (Annex 2).

the setting up of further school types if they accord to the rulings of this agreement. In the 1969-70 school year, Fachoberschulen with the following subjects were established in the Länder of the Federal Republic of Germany:

Fachoberschulen for engineering

Fachoberschulen for economics (and administration)

Fachoberschulen for domestic science

Fachoberschulen for social studies

Fachoberschulen for design

Fachoberschulen for ocean navigation.

The breakdown in instruction is one of the characteristics of the Fachoberschule. Instruction is divided into:

General instruction

Instruction in separate subjects

Practical training by subjects.

Practical training takes in Class 11 (first year) in the Fachoberschule and lasts the whole year, four days a week. Apart from this, there are eight hours a week at least of instruction.

In Class 12(1) (second year at the Fachoberschule) 30 hours compulsory instruction are given per week in general lessons and lessons by subject. Compulsory subjects are German, social studies, mathematics, natural sciences, one foreign language and physical education. The subjects for general instruction are the same for all the subject groups. At least 3/5 of the compulsory instruction are general education. The compulsory subjects as part of compulsory instruction by subjects are determined by the subject group.

The appropriate material for lessons is selected according to subject standpoints.

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1) The "General Agreement" in its new version provides the opportunity of taking Class 12 part-time.

The following timetables and guidelines for guided trainee education provide a closer insight into a Fachoberschule in subjects such as engineering, economics, social work/social education(1):

(1) Instruction is based on the following timetable:

	Lessons per week	
	Class 11	Class 12
A. General instruction For all subjects		
German	1	4
English	1	4
Social studies	1	2
Mathematics	1	4
Natural sciences	-	4
Physical education	-	2
	4	20
B. Instruction by subject Engineering/Technology		
Applied mathematics	2	-
Technology	2	4
Technical design and Geometry	2	3
Mechanics	-	3
	6	10
Economics		
Economic theory	2	4
Industrial accountancy	2	3
Economic calculation	2	3
	6	10
Social Work-Education		
Education/psychology	2	3
Health/biology	-	2
Social studies II	2	2
Expression and design	-	3
Legal and constitutional studies	2	-
	6	10

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1) Source: Rulings on the establishment and running of Fachoberschulen. Decree of the Minister of Culture of Lower Saxony of 25th March, 1970 - III/3 - 100/70.

Preliminary Guidelines for Guided Trainee Education in Class 11 of the Fachoberschule

Trainee education should as a rule be carried out according to the following education plan:

Engineering/Technology

Building Construction

Basic Training	26 weeks

Recognised is training in the following vocations

1. Bricklayer
2. Concrete and reinforced concrete mason
3. Joiner
4. Reinforced concrete mechanic
5. Building joiner

Supplementary Training	22 weeks

Recognised is training in vocations connected with building

1. Stone-mason
2. Stucco-worker
3. Concrete worker, concrete-stone maker, mosaic-layer
4. Fitter, builder-fitter workshop fitter
5. Gas and water installater, central-heating and ventilation builder, Piping installater
6. Roofer
7. Mosaic, slab and tile layer
8. Joiner
9. Building draughtsman
10. Vocations listed under Basic Training 1-5 as far as in these the basic training was not carried out

Total training	28 weeks
Holiday up to	4 weeks
	52 weeks

Economics

Practical education can take place in suitable firms, e.g. in industry, trade, banks and insurance companies, according to the following plan:

Acquisition	including storehouse	9 weeks
Sales	including goods and information traffic	13 weeks
Industrial Accountancy	including costing and billing	13 weeks
Financial Book-keeping	including payments	13 weeks
Total training		48 weeks
Holiday up to		4 weeks
		52 weeks

The plan is to be applied according to the economic branch concerned.

Social Work/Social Education

Practical education serves training in the various branches of social work and social education. It is supplemented through practical work in industrial firms.

Work programme:

1.	In hospitals (a four-week nursing course is to be taken during the nursing practical work)	13 weeks
2.	In social and social-educational institutions	22 weeks
3.	In industrial firms	13 weeks
Total training		48 weeks
Holiday up to		4 weeks
		52 weeks

Numerical Development of the Fachoberschule

Fachoberschulen are being set up at present in the Länder. The number of pupils in the 1969-70 school-year was 21,900. (See Part IV: Statistics)

5.2.3. Vocational Education and Further Education in Schools

5.2.3.1. Fachsculen(1)

Fachschulen accept young people and adults who are beyond the age of compulsory schooling. They train medium-level specialists who are in a position to work independently (e.g. in craftwork, in agriculture and in domestic jobs). They also train a new generation of workers or the same specialists practice after training senior vocations within limited spheres of responsibility (e.g. in industrial firms, in large-scale commercial undertakings, in the administrative sector, in social work or health services).

In general, Fachschulen follow on to a completed vocational education and practical experience(2) in the respective jobs or on to a several years of practice with a final examination. They set as a precondition the successful conclusion of education at a Hauptschule or Realschule-level educational certificate, independent of the respective educational objective. In this respect, the Fachschulen serve the aim of vocational further education.

Types of Fachschule and Their Position in the Educational System

Fachschulen train specialists and are therefore not counted as schools which prepare their pupils for studies in the university sector.

The Technikerschule(3)

Technikerschulen demand as a precondition for admission the successful conclusion of the Hauptschule or the Berufsschule, the successful conslusion of vocational education and additional vocational experience.

The education leads to "state qualified technician" at public and private Technikerschulen, where this is imparted at full-time schools (Tagesfachschulen), three half-years and at evening schools (part-time education) six half-years.

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1) Addenum 27 "Group Designations in Vocational Education" loc.cit. "Fachschulen".

2) Admission to Fachschulen for Social Education depends on at least one year's practical work at a suitable institution, not therefore a completed vocational training.

3) Addendum 28 "General regulations for the Education of Technicians" (Resolution of Kultusminister-Konferenz of 27th April, 1964).
Addendum 29 "General Regulations for the Examination of Technicians" (Resolution of Kultusminister-Konferenz of 10th September, 1965).

The "General Agreement for the Training of Technicians" includes the subjects "Machine construction", "electrotechnology" and "building technology" and permits the establishment of Technikerfachschulen for other subjects.

Education at Chemotechniker-Fachschulen(1) accords with the education at Technikerschulen.

Fachschule for Textile and Clothing Professions(2)

Fachschulen for textile and clothing professions demand prior to admission the final certificate at the Hauptschule and a completed vocational training.

Training for "state qualified textile technician" or for "state qualified clothing technician" lasts 1½ years at a full-time school and appropriately longer at part-time schools.

The final certificate gained at Fachschulen for textile and clothing professions does not give a pupil the right to attend Höhere Fachschulen for the textile and clothing professions. These schools only accept applicants with a secondary-level final certificate and vocational pre-education.

Fachschulen for Domestic Professions

These are subdivided into

1. Fachschulen for domestic sciences to train housekeepers, and

2. Fachschulen for domestic sciences to train senior housekeepers and manageresses.

In the first case, the precondition for admission is the final certificate of a Hauptschule and the relevant vocational training.

Training for "state qualified housekeeper" lasts at least one year at full-time Fachschulen and appropriately longer at part-time Fachschulen. The certificate gained does not give right of admission to the following domestic science Fachschule or to study at the Höhere Fachschule or Hochschule.

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1) Addendum 30. "General Regulations for the State Examinations of Chemo-technicians" (Resolution of Kultusminister-Konferenz)

2) Addendum 31. "General Agreement on Fachschulen and Höhere Fachschulen for the Textile and Clothing Professions" (Resolution of the Kultusminister-Konferenz of 3rd October, 1968).

For admission into the second type of Fachschule listed above, the precondition is a final certificate in a secondary-level school coupled with proof of two-years professional work in a household, or vocational education.

The training for "state qualified senior housekeeper or manageress" lasts two years. The objective of the training is higher in this case as than the training for state-qualified housekeeper as it empowers successful pupils to train apprentices and trainees.

Admission to studies as a Höhere Fachschule or at a Hochschule is not foreseen, however it is possible on the basis of the preconditions for admission, namely secondary-level final certificate.

The Landwirtschaftsschule

Landwirtschaftsschulen are Fachschulen following on to the final certificate of a Hauptschule and practical vocational pre-education (as a rule the conclusion of a Landwirtschaftliche Berufsschule and vocational education), and lead to a final examination in two winter half-years. The passing of this examination is the precondition for the examination as agricultural master-craftsman. Apart from this, successful pupils at the Landwirtschaftsschule, who have passed the final examination with at least a good total result, can enter a Höhere Landbauschule after a further three years vocational practice.

The Höhere Landbauschulen(1)

Höhere Landbauschulen are Fachschulen. A precondition for admission is a secondary-level final certificate (or passing the entrance examination) or a good total performance in the Landwirtschaftsschule examination, as well as the completed agricultural vocational training with ensuing minimum of three years practical work.

The one-year training, which includes at 220 days of instruction, concludes with a state final examination as "state qualified farmer".

The training based on the qualification as farm manager of larger agricultural concerns is not aimed at a period of studies in the university sector. As far as the successful candidates possess a secondary-level final certificate, it will be possible to enter the university sector.

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1) Addendum 32. "General Agreement on Höhere Landbauschulen" (Resolution of Kultusministerkonferenz of 18th March, 1970).

Fachschulen for Industrial Management(1)

Preconditions for admission to the Kaufmännische Fachschule are a secondary-level final certificate and a completed vocational education in business with ensuing minimum of two years business practice or several years practice in industry or administration (if need be coupled with a final examination).

The training for "state qualified manager" lasts a total of four terms and is divided into a basic sector and a specialist sector.

Meisterfachschulen

Meisterfachschulen and industrial master-craftsmen courses prepare pupils in a one to four-term course in full or part-time instruction for the master-craftsman's examination. This examination is given by examination committees of the chambers of industry and commerce. The attendance at preparatory courses is however not a precondition for admission for the master-craftsman's examination(2).

Numerical Development of Fachschulen

In 1969, some 103,700 pupils (45 per cent female) attended Fachschulen under the responsibility of the Cultural Ministries. This figure does not contain pupils at schools of health (1968, 1,500 pupils). These include 89 per cent females. (See Part IV Table B.6.1.)

5.2.4. Development Trends

The dual system in vocational education will continue to exist. This is documented by the success of this form of education and passages of the Vocational Education Law.

There are strong indications, however, of a more marked shift in education to the school with at present a time-share of about 20 per cent.

In the sectors that will continue in the dual system, steady improvements are being made in industrial training through the expansion of the on-the-job and supra-industrial training system.

These measures are intended to help remove the disadvantages for apprentices in those vocational and industrial branches where small and medium-sized firms are in many cases unable to meet the demands made by the Vocational Education Law on the qualification and suitability of the instructors and the training firm.

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1) School experiment since 1st October, 1970 in Baden-Württemberg Addendum 33 (Timetable).

2) Further Fachschulen, see Addendum 34.

Efforts in industry are accompanied by measures on the part of school authorities in the Länder to bring about a correlation in content and duration of the syllabuses with the training regulations, whereby a parallelism, often missing at present, would be established between school and industrial training.

The training of qualified specialist personnel will continue to be in the hands of the Fachschulen. To this end, these schools will maintain their close contact with practical work and will have to continually adjust their training to the latest stage reached in training skills. Without taking on the character of transit schools, the Fachschulen will open the way more than before to a university study for talented pupils.

The start made to reforms in vocational education were traced back in the past mainly to the initiative and co-operation of firms and schools, self-administrative and state-administrative bodies. One should name first and foremost in this connection:

1. the establishment of apprentice workshops within the firms concerned and supra-industrial training shops,
2. experimentation with models in the basic and phased training,
3. the concentration of vocational groups subject to training rulings through the redrafting of training regulations, and
4. the testing of new forms of instruction in vocational education, e.g. that of correspondence courses and programmed instruction.

The Vocational Education Law has created new legal and practical preconditions for reforms. Among these are regulations on the establishment and content, as well as the start and finish of a vocational education relationship, the status of vocational education in public law, the co-operation in a spirit of partnership of all those taking part in vocational education in vocational education committees at State, Länder and chamber levels, and vocational education research.

In its action programme "Vocational Education" of 5th November, 1970, the Federal Government delineated in concrete form the measures that would have to be taken to improve the practical and legal relationship conditions in vocational education on the basis of current legal possibilities. The action programme was directed both to those wanting training and those responsible for giving vocational education. In particular, the new openings created by the Vocational Education Law should be fully utilised and made to have effect in training practice. In detail this involves especially the following measures:

1. Legal regulations on the qualification of instructors and training places should be realised fully.

2. Through a new Law on the Constitution of Enterprizes (Betriebsverfassungsgesetz), the firms' advisory councils and youth representatives should receive the right of codetermination and shaping of vocational training. Also foreseen is an amendment to the Young People's Labour Protection Law, which is of considerable importance for the training of young people.

3. In collaboration with the Länder, the Federal Government will support all projects suited to make vocational school instruction more effective.

4. The Federal Government has begun to draw up new training regulations that replace numerous outdated vocations requiring training by fewer, modern vocations and that introduce as far as possible phased training.

5. The Federal Government will provide increasing support for the establishment and the expansion of supra-industrial training workshops.

6. Together with the Federal Labour Office, the Federal Government will modernise careers advisory services. It will urge in the State-Länder Commission for Education Questions that vocational, industrial and economic studies become instruction subjects at schools providing general education.

6. The Training of Teachers

The training of teachers for schools providing general education and for vocational schools is divided into two parts:

1. A course of study at a university or another scientific school of the same standard. The "first state examination" is taken at the end of the course.

2. Introduction into school practice, varying according to the different teaching careers. The "second state examination" is taken at the end of this part of training.

6.1. Course of Study and Introduction into Practical Teaching

Teachers at Grundschulen and Hauptshulen undergo academic studies at "Pädgogische Hochschulen", which in most cases have the same status as universities.

In the Länder Hamburg and Hesse, teacher training for Grundschulen and Hauptschulen takes place at the universities.

In Bavaria, "Pädagogische Hochschulen" are part of the universities. Students there are at the same time students at a university.

The course of study lasts at least six semesters and includes education and subject-oriented studies. One subject has to be selected as a main subject and has to be studied more intensively.

Apart from this, the student chooses between studies oriented more on the demands of the Grundschule or of the Hauptschule.

As a rule, Realschule teachers are trained at universities. Studies include education and subjects for instruction. The main emphasis lies however on subject studies in such a way that a teacher is able to teach two subjects at a Realschule. The selection of subjects is left to the student within the framework of combinations of subjects laid down by the Ministries of Education and Culture of the Länder. The course of study lasts at least six semesters, and at least eight semesters in Berlin, Lower Saxony and the Saar. Periods of practical work are part of the course of studies.

Teachers at Gymnasium and vocational schools are trained at universities. The course of study lasts at least eight semesters. It includes education and subjects for teaching. Students must prepare to teach two subjects at a Gymnasium. The choice of subjects is open within the framework of subject combinations laid down by the Ministries of Education and Culture.

Practical work is done during the period of studies.

Before or during the time of academic training teachers at vocational schools spend an additional period of work in industry or trade. It is directed by the university and lasts in general eighteen months.

All teachers take the "first state examination".

The teachers "first state examination" is followed by what is called "preparatory service" as an introduction to school practice. This takes place in various forms and for different periods of time.

In most of the Länder teachers at Grundschulen and Hauptschulen start work in schools directly after their "first state examination". However, they do not take the whole teaching load of a fully trained teacher, and as a rule, once a month they take part in all-day seminars in which practical experience in the classroom is given theoretical support.

This in-service training lasts for a period between two and four years, varying from Land to Land.

In Hamburg and North Rhine-Westphalia, future teachers enter special seminars ("Studienseminare", "Bezirksseminare") after their "first state examination". Here they undergo a more firmly directed second training period. In "training schools", they visit classes taught by experienced teachers, and, to a certain extent, they teach classes either under supervision or in their own responsibility. The experience gained is deepened and widened theoretically in seminars.

This form of in-service training is called the "Referendariat" and lasts two years in Hamburg and one year in North Rhine-Westphalia.

While "Lehramtsanwärter" (teachers waiting for a permanent appointment) who enter school service directly after the "first state examination" are paid as regular teachers, the "Lehramtsanwärter" who are trained in a "Referendariat" do not receive regular salaries, but a so-called "Unterhaltszuschuss" (maintenance subsidy).

Teachers awaiting appointments at Realschulen undergo a "Referendariat" after the "first state examination" in most of the Länder. It lasts generally eighteen months. In a number of Länder (Berlin, Bremen, Hesse and Lower Saxony), teachers awaiting appointment enter school service immediately and undergo preparatory service like the relevant group at Grundschulen and Hauptschulen.

Teachers awaiting appointments at Gymnasium and vocational schools have to undergo a "Referendariat" of usually two years duration in all the Länder.

At present, the duration of the "Referendariat" has been shortened in most of the Länder because of the shortage of teachers.

At the end of in-service training the teacher takes the "second state examination". The teacher is then fully trained and is usually appointed a civil servant ("Beamter auf Lebenszeit").

6.2. Teachers at Schools for Handicapped

In most of the Länder training for the teaching at Schools for Handicapped is open only for teachers who are qualified to teach at Grundschulen or Haupschulen (in some of the Länder also at Realschulen and Gymnasium) or at vocational schools.

Training takes place in institutes of therapeutic education ("Heilpädagogische Institute) which are established at universities or "Pädagogische Hochschulen". As a rule, training lasts four semesters with additional practical training at a School for Handicapped. At the end of the training the "state examination for teachers at Schools for Handicapped" is taken. Training deals with general problems of therapeutic education as well as with special problems connected with the specific handicaps in which the teacher is interested.

In North Rhine-Westphalia, another course of training for teachers for handicapped has existed since 1970 (Teacher Training Law 24th March, 1969). Here the teacher need not have the qualification to teach in another type of school. This kind of training lasts eight semesters, including the study of education, two related special educational subjects, another compulsory subject chosen by the student, and an in-service training of eighteen months.

6.3. Teachers for Arts and Technical Subjects

In order to overcome the shortage of teachers, a number of Länder in the Federal Republic have established training courses for teachers which can be attended by persons possessing leaving certificates from a Realschule or a certificate of equal standard.

Training takes place in "Fachinstitute" that do not have university status. It includes mainly such subjects as woodwork and metalwork, domestic science, needlework, physical education, drawing, and in Bavaria also shorthand and typewriting. The period of training varies between two and four years according to the subjects chosen and to the individual Land.

Following the final examination, there is a one-year period of practical training, which also ends with an examination. After this the successful candidates can enter the civil service as teachers. They are also given the opportunity of getting full qualification as regular teachers through shorter courses of study.

Teachers at vocational schools who teach practical subject knowledge and skills have either passed the master-craftsman's examination in their subject or have a final certificate from an appropriate technical school ("Fachschule") when they have studied for at least two semesters with full-time instruction. For the appointment at vocational schools four to five years of practical work in the vocation trained for is a further prerequisite after the acquisition of the above-mentioned certificates.

These teachers do not receive an educational training in all the Länder.

6.4. The Professional Status

Appointment and Career

There are two stages to note in the appointment of teachers to school service:

1. Appointment after the "first state examination" to a probatory service in schools with simultaneous appointment as civil servant on probation, or the appointment to the "Preparatory service" (Referendariat) with simultaneous appointment as a civil servant on recall.

2. After passing the "second state examination", and the conclusion of a probationary period, the appointment as a civil servant for life.

The preconditions for an appointment as a civil servant are German nationality, full physical and mental capacities - to be confirmed through official medical examinations - suitability as far as the subject of teaching is concerned, to be proved through certificates of education and examinations, as well as absence of serious court punishments.

In addition to that, it must be clear that the applicant supports the principals of freedom and democracy.

For the appointment as a civil servant for life, a person must be 27 years old, must have passed the "second state examination" and have completed a probationary period.

As a rule, this probationary period lasts two to three years, at the most five years, but in a number of Länder six years. After this, the civil servant on probation is appointed civil servant for life, if he fulfils the legal conditions for the civil service.

As a civil servant for life, a teacher can be retired against his will only for serious reasons laid down precisely in the law.

The advancement and promotion of teachers at all kinds of schools is based on their abilities and service merit. A civil servant has no legal claim to promotion. They have, however, the possibility of applying for advertised positions with higher pay. In addition to that, for a number of years, teachers at Realschulen and Gymnasium have had the possibility of regular promotion as it is called, i.e. payment on the basis of a higher rank in the pay scale when they have served a certain number of years - usually sixteen years - and have given good service during this period.

The great majority of teachers at public schools ("öffentliche Schulen") are civil servants. They are subject to the legal rulings of civil-servant law.

There are however other teachers employed who have not the status of civil servants, especially those on a tempoary or subsidiary basis or those who do not fulfil the requirements for civil-service status. Employment conditions for these teachers are governed by the regulations laid down in general labour laws and by the regulations of a wages agreement for state employees concluded between the Federal Government, the Länder and the local authorities on the one hand and the Trade Unions for Public Services, Transport and Traffic on the other ("Bundesangestelltentarif"). The rights and obligations of such teachers are very similar to those of a civil-service teacher. However, the contract with a teacher who is not a civil servant can be terminated from either side, with respect to a specific period of notice, which depends on the period of service completed by the teacher. If a teacher has worked for fifteen years, he cannot be retired against his will, even if he is not a civil servant.

Rights and Obligations of the Teacher

The professional work of the teacher is often characterised by the term "educational freedom". This means freedom of choice in methods of instruction, in the selection of topics for teaching within the framework of the syllabuses laid down by the school authorities, and also the freedom in the choice of books and in the assessment of pupils and their performance.

This freedom is limited by the necessity of co-operating with other teachers in the school and by the need for unity in school work. These limits are marked down at teachers' conferences in school. The conference is obliged, however, to give each teacher a certain amount of freedom to develop his teaching talents. The "General Conference Order" for schools in North Rhine-Westphalia of 19th October, 1969 is included as an addendum.

The educational freedom of the teacher and of the teachers' conference has to be seen within the framework of school organisation, syllabuses and curricula, timetables, basic rulings on the promotion of students and the carrying out of examinations, which is set up by supervising school authorities.

Educational freedom for teachers is anchored in law in most of the federal Länder. It is considered existing in those Länder where there are no formal rulings.

As an example of the legal rulings on teachers' educational freedom, the relevant passages from the "First Law on the Uniformity and Regulation of the School System of Baden-Württemberg Land of 5th May, 1964 in the version dated 19th March, 1968 are quoted:

§22

> 2) Within the framework of the educational objectives contained in Article 12 of the Baden-Württemberg constitution and of the respective curricula, the teacher has direct educational responsibility for the teaching and education of the pupil.

§25

> 1) Irrespective of the educational responsibility of the individual teacher and the responsibility of the head of the school, the teachers' conference discusses and decides within the framework of the laws and administrative rulings on the measures necessary for instruction and education in the school and promotes fruitful co-operation among the teachers.
>
> 2) The decision of the teachers' conference are binding for the head of the school and the teachers.......

Beyond the framework of the school, teachers in Germany as a rule participate in school legislation and administration through the so-called "School Advisory Committees" in the Länder. The members of these committees are nominated by the Minister of Education and Culture on the recommendation of the organisations and associations interested in the form of the school system, including the Churches and parents' associations. Teachers from the various kinds of schools are proposed by the teachers' association and the Trade Union for Education and Science.

In addition to the School Advisory Committee, Hamburg has a special organ known as the "Teachers' Chamber". The members are elected for a period of four years by the teaching body of all schools according to the principles of proportional ballot. It elects from its members the delegates to the School Advisory Committee of the Land for the teachers' group.

The School Advisory Committee's task is to advise the Ministry of Education and Culture in the preparation of basic measures to be taken in the administration and development of the schools. It is entitled to put forward to the Ministry of Education and Culture proposals and ideas.

Remuneration of Teachers

The remuneration for teachers is regulated by the laws on remuneration for civil servants and the valid wage agreement for employees in public service. It is made up of a basic salary, additional local allowance, children's allowance and additional remuneration for special responsibilities. The basic salary consists of payments according to the seniority of the teaching position and the age of the teacher. Salaries are raised every two years by a fixed amount (length of service payment) up to the final basic rate.

The allowance takes into account additional expenditures arising for the teacher through cost of living in his area of residence. In large cities, where rents are higher, the allowance is higher; in rural areas it is lower. The marital status and the number of children are also relevant for the amount paid as local allowance.

The children's allowance totals DM 50 a month for each child.

In certain cases, special payments are made for functions through which teachers or school heads carry higher responsibilities than colleagues in similar positions.

The monthly basic starting salary for a teacher at Grundschulen and Haupschulen, at the age of 28, was about DM 1,150 at the end of 1970. This figure rises every two years by about DM 50 up to a final basic salary of about DM 1,800.

The monthly basic starting salary of a Realschule teacher amounts to about DM 1,250 and rises every two years by about DM 55 to a final basic salary of about DM 2,050.

The monthly basic starting salary of a Gymnasium teacher is about DM 1,300 and rises every two years by about DM 65 to a final basic salary of about DM 2,300.

The local allowance ranges from DM 251 to DM 387 a month according to place, salary group and marital status. Up to the fifth child additional DM 50 are paid per child, from the sixth child on DM 62 are paid per child.

The remuneration of teachers is the same as that of other civil servants with similar qualifications employed by the Federal Government, the Länder or the local authorities.

Social Security Payments for Teachers

Like all civil servants, the teacher can claim comprehensive welfare assistance from his employer according to civil-service regulations. This assistance applies not only to himself, but also to his wife and his children.

Such assistance includes aid in cases of sickness, birth or death, which, according to marital status, makes up 50% to 70% of the expenditure. Assistance is also granted for spa treatment (health cures) and sanatorium treatment, the necessity of which has to be approved of by the authority concerned. This assistance includes expenditure for baths, massage, spectacles, orthopaedic shoes, dental treatment, remuneration for cleaning the home, etc.

If the teacher has an accident as a result of or during his work, he, or his family in case of death, will be paid an accident allowance.

After reaching retirement age, the teacher receives a pension based on the scale of his salary and the length of his service.

The pension totals 35% of his salary and rises after ten years pensionable service with every further service to a maximum of 75%.

When the teacher dies, his wife and children are paid the full salary or the pension of the deceased for the month in which he died and the following two months.

The widow is paid a sum totalling 60% of the pension, and the children receive special payments ("Waisengeld").

Teachers who are not civil servants receive the same assistance as civil-service teachers and are under compulsory insurance in case they become invalids and for the time following retirement age. Half this sum and more is paid by the employer.

6.5. Further Development

Efforts to improve the school system in all sectors have made clear the necessity of improving teacher training.

The concept of a Grundschule and a Hauptschule whose teaching is based on science, as well as the central problem in this sector, namely the promotion and differentiation of talents, reveal the inadequacy of teacher training for Grundschule and

Hauptschule in contrast to that for Gymnasium teachers. An extension of the length of training and, above all, an improvement in scientific studies is aimed at.

An improvement in the training of teachers at Gymnasium is also asked for. It should be accomplished through greater emphasis on educational studies in the first part of training.

The German Educational Council recommended in its "Strukturplan" (plan for the future structure of the school system) that the training of teachers should no longer be divided according to the various types of schools, that training courses should be designed according to the school level on which the teacher wants to work and that all levels of the school system should be considered to have equal quality and importance.

This would mean that in the future there would no longer be teachers at Grundschulen, Hauptschulen, Realschulen, Gymnasium and vocational schools, but only teachers on the primary level, secondary level I and secondary level II.

On 8th-9th October, 1970, the Ministers for Education and Culture of the Länder discussed a new plan for the training of teachers in all types of schools, which is very similar to the basic ideas of the German Educational Council. Accordingly there would be teachers only for the various levels of schools whose training and status would be almost equal.

7. Summary of the Development and Problems of the Present System

The development of the present school system began after the collapse of the German Reich in 1945 in a situation of confusion and devastation.

The first stage of development can therefore be described as a phase of reconstruction of schools and school organisation, and as a time of attempts to find a new starting point essential for the construction of the educational system.

This is clearly shown by a resolution passed by the first conference of Ministers of Education and Cultural Affairs of the German Länder in February 1948 in Stuttgart. The ministers announced their intention to carry out the construction and development of the school system in the spirit of democracy and social justice, peace and international understanding. The ministers demanded that all children should be entitled to a full development of their talents, irrespective of the financial situation of the parents, and that the educational objectives and systems in the German Länder should become equal. At the same time, they pointed to the difficult external situation, the inadequate clothing and diet of the children, the disastrous living conditions, the shortage of classroom space, the lack of fuel, and the dislocation of family life through flight, expulsion and wartime imprisonment.

Apart from reconstruction other primary objectives in the initial years of developing the school system again were the questions, which form the Grundschulen should take, how talented pupils could be promoted in a better way through a practical regulation of transfer to secondary schools, and how the basic conditions of the schools in rural areas could be improved.

Clear organisational solutions were first of all the extension of Grundschule education from four to six years in the city states, and the introduction of a course system in the fifth and sixth and even seventh years in a number of Länder, through which talented pupils should get the opportunity to qualify gradually for secondary level schools without having to be separated from the other pupils after the fourth school year.

It should be noted that the upper grades in the Volkschule was not yet recognised as a secondary school like the present Hauptschule.

With the constitution of the "Deutscher Ausschuss für das Erziehungs- und Bildungswesen" (German Committee for the Educational system) in 1953, obvious efforts were made to set up a uniform plan for the development of the educational system in the Länder of the Federal Republic.

During its six years of activity, the "German Committee" passed a number of reports and recommendations on special problems of the educational system, and finally on 14th February, 1959, published a "General Plan for the Re-organisation of the public School System" providing general education with the aim of reaching uniformity of the schools.

This first and detailed plan proceeded on the assumption that the traditional school system divided into three streams of education, which differ from each other in length and quality, meet the demands of a society, which is based on the principle of divided tasks and responsibilities. The school system should however be developed in such a way that every child would receive an education appropriate to his abilities, and apart from this all children should share a common school life until the character of a special type of education made a division into special schools inevitable.

Based on these theses, a system was drawn up on the basis of a four-year Grundschule, followed by a two-year "Forderstufe" (promotional level) for all children where opportunity was given to qualify for secondary-level schools.

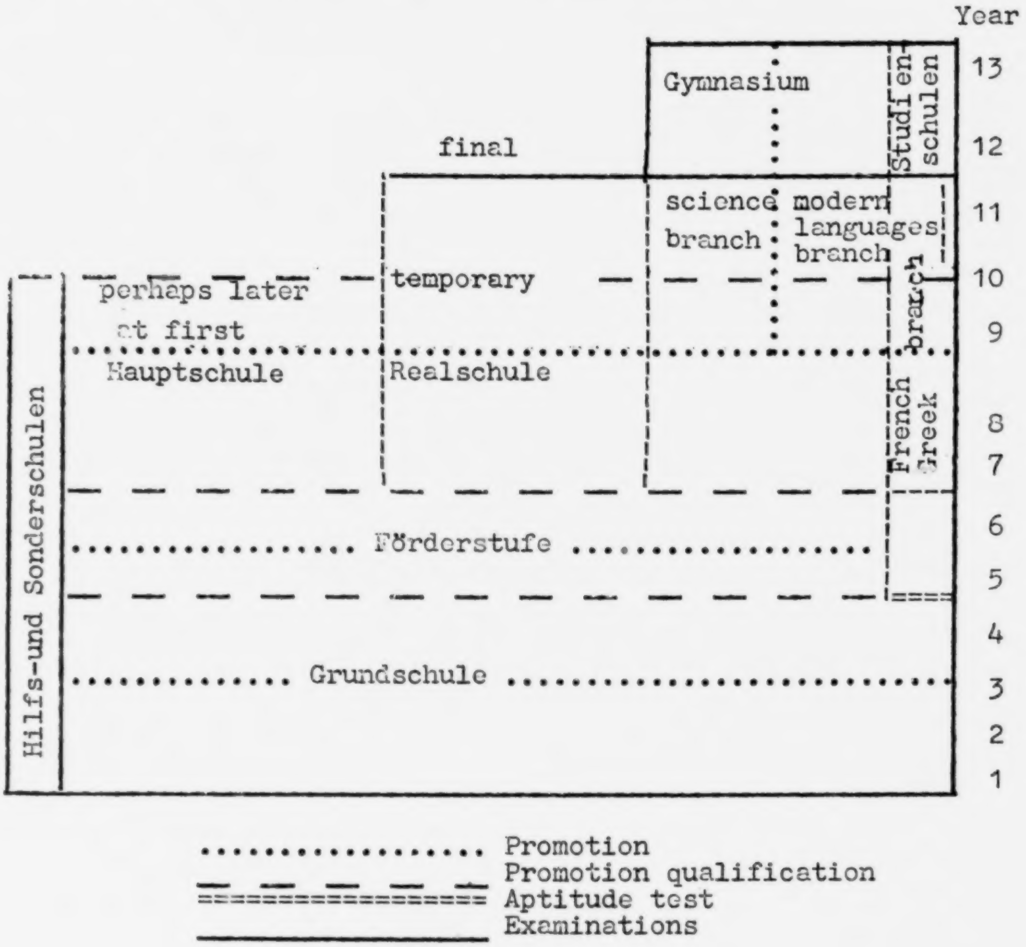
These secondary-level schools are

1. the Hauptschule leading to grade 9,
2. the Realschule leading to grade 11, and
3. the Gymnasium leading to grade 13,

divided into a natural science branch, a modern language branch, and a French-Greek branch, the so-called Studienschule.

The Studienschule was to have a special status as a kind of élite school, which could be entered by pupils after the fourth school year after passing an entrance or aptitude test.

Structure of the School System According to the General Plan of the German Committee


Year
Gymnasium
Studien-schulen
13
final
12
science branch
modern languages branch
11
perhaps later
temporary
10
at first
French branch
9
Hauptschule
Realschule
Greek
8
7
Hilfs-und Sonderschulen
Förderstufe
6
5
4
Grundschule
3
2
1
Promotion
Promotion qualification
Aptitude test
Examinations

The General Plan provoked a lively discussion and criticism particularly with regard to the Studienschule.

It had a strong influence on the further development of the school systems in the Länder. At the same time, the need for efforts to improve the educational system and to increase the number of qualifying courses was brought to the attention of the public.

In the "Hamburg Agreement of the Länder", the recommendations of the German Committee to develop the "Hauptschule" out of the former "Volkschule" were put into effect. The Länder also agreed to introduce foreign language instruction from grade 5 on, and to make the word "Hauptschule" an official term. This development was rounded off with the recommendations of the Kultusministerkonferenz on the "Hauptschule" passed on 3rd June, 1969.

The "Förderstufe" (promotional level) designed by the German Committee, an idea based on a number of experiments already carried out in the Länder, was recognised as a possible form of organisation for classes five and six and was further tested in various ways in all the Länder.

So the following points can be called the characteristics of the first phase of development in the Länder of Germany.

Concentration and improvement of the Grundschulen and Hauptschulen particularly in the rural areas (the setting up of "Mittelpunkschulen" and "Dorfgemeinschaftsschulen"), introduction of a senior level at the Volkschule, called "Hauptschule", and the development of facilities to improve the transition from the Grundschule to secondary schools.

Two examples may show that these developments were not accomplished in a single way without problems.

With efforts to improve and further develop the old Volkschule, particularly in the country, the question arose whether it was useful to have a denominational "Volkschule". After long and often bitter discussions and debates, in most of the Länder it was made possible through constitutional changes to combine formerly denominational and often small subdivided "Volkschulen".

In Bavaria, in the course of his process, the number of one-class "Volkschulen" which were attended by 7.7 per cent of the pupils, dropped from 2,135 in 1957, to 1,430 in 1966, with attendance by 3.5 per cent of the pupils. Today, there are no one-class schools in Bavaria any longer.

Towards the end of the 1950s, a further obstacle in the way of development was the great lack of teachers at "Volkschulen". This was the result of the coincidence of years with many pupils and newly trained teachers. It led to increased recruitment measures for the teaching professions by the cultural authorities and to a number of emergency measures. Despite these difficulties, the teacher-student ratio improved steadily, on the national average from 35.7 pupils per teacher in 1961 to 31.4 pupils per teacher in 1968.

With the idea of the "Förderstufe", the problem of promoting talents was only partly solved. The question arose of further possibilities of transition not only from the Grundschule or the "Förderschule", into one of the secondary schools, but also from the "Hauptschule" to the "Realschule" and to the Gymnasium and from the various vocational schools on the secondary level into the universities. Even today this problem of transfer openings, the freedom of movement of pupils in the school system, is still being discussed under the heading "horizontal permeability".

Apart from the restructuring of the "Volksschule", a further development began, whose aim was to increase the number of qualifying courses with appropriate leaving examinations in order to give each child the right to be educated.

The important elements of this development are first the improvement of permeability through a strongly differentiated procedure in the transition from the Grundschule and Hauptschule to the Realschule and the Gymnasium, through the creation of additional transfer openings with the establishment of special forms of secondary schools and the improvement of possibilities of promotion, that's to say the reduction of failure quotas through suitable measures to improve methods of instruction.

Thus together with the "Förderstufe", at the Volkschulen", the "Beobachtungsstufe" (observation level) was established at secondary schools.

According to the guidelines and recommendations of the Conference of Ministers of Education and Cultural Affairs in the principles of instruction in grades 5 to 11 at the Gymnasium, passed in June, 1966, it was determined that grades 5 and 6 of all schools providing general education form one educational unit, so that the usual method of promoting students from one grade to the other is limited here, and the educational work can be put on a broader basis.

In order to reduce the amount of instructional material in the upper level of the Gymnasium in favour of a better understanding of the subject material and a better preparation for the university, the Agreement of the Conference of Ministers of Education and Cultural Affairs on the Principles of Instruction at the upper level in the Gymnasium of September 1960 urged a restriction of the number of subjects, and the areas of instruction by selecting and emphasising certain fields of studies and by changing compulsory subjects into optional subjects by giving a choice between compulsory subjects. The idea of "horizontal permeability" may not conceal the fact that in this way too in the final analysis the way to a secondary level education should be opened for as many pupils as possible, that the movement created by the horizontal permeability aims in a vertical direction, namely to the university.

In many school experiments, the school authorities have therefore sought first of all a broader differentiation of the upper level of the Gymnasium through the traditional Gymasium types of the classical, the modern languages, and the mathematical-natural science types. So the social science, economics, and arts types of the Gynasium were developed, which led to the general "Hochschulreife", (admission to university) as well as other types of the economics Gymnasium and the Gymnasium for female education which lead to the "Hochschulreife" for specific subjects.

Other types, such as the technical Gymnasium, the "Pädagogisch-musisches Gymnasium" and the "Werkgymnasium" exist in some of the Länder.

Alongside this differentiation of the upper level of the Gymnasium as one development towards "horizontal permeability", the question arose how the education of the "Hauptschule" and the "Realschule" could be continued in the vocational school system in a meaningful way.

With the leaving certificate of the "Realschule", there has always been the opportunity for students to attend "Höhere Fachschulen" of various types and to acquire admission to the study of certain subjects at the university after a qualified completion of courses at one of these "Höhere Fachschulen".

For pupils at the "Volksschule" (Hauptschule), the possibility was opened to obtain the so-called "Fachschulreite", after a three-year course at a "Berufsaufbauschule". It is equal to the leaving certificate from a "Realschule". This in turn opens the way to further education which is also open to the students from "Realschulen".

However, it takes the Realschule student five years from the final examination in the 10th grade to the acquisition of his "Hochschulreife" in one subject, which is two years more than the equivalent course at a Gymnasium.

After the "Ministerpräsidenten" of the Länder, with their agreement of October 1968, had decided to transform the [illegible]öhere Fachschulen" into "Fachhochschulen" and to set up "Fach[illegible]rschulen" providing access to the Fachhochschulen, the situ[illegible]on here also changed considerably.

A precondition for entering "Fachoberschule" is the leaving certificate from the "Realschule" or a similar qualification. This qualification can also be acquired today by pupils at the Hauptschule through a voluntary tenth year at school.

In this way, students from the "Hauptschule" can enter higher education after 12 years at school. After three semesters at the "Fachhochschule", it will be possible for them to transfer to the university to continue their studies.

On the basis of the above mentioned improvements in the "horizontal and vertical permeability" in the educational system, the number of students entering the Gymnasium and the number of qualified certificates has increased considerably and will continue to increase in the future.

If the chances of a better education and better conditions for learning are to be improved for all pupils, considerable importance must be attached to the establishment and development of the so-called "all-day schools", in which, students go to school in the afternoons, too, so that curricula and instruction can be differentiated to a greater extent and pupils' individual talents can be developed more effectively.

On the basis of a recommendation by the German Educational Council, on 3rd July, 1969 the Länder agreed to carry out an experimental programme for all-day schooling. A second agreement also based on the recommendation of the Educational Council was reached by the Conference of Ministers of Education and Cultural Affairs in November 1969 with the aim of carrying out experiments with comprehensive schools. The results of these two experimental programmes will provide further information on a practical form of school system and the best promotion possible for all the pupils concerned.

First steps towards a reform of vocational training were made in the sixties. They go back to the initiative and co-operation of firms and schools, self-administrative and state administrative bodies. Mention should be made here primarily of:

1. the establishment of apprentice shops, run by one or more factories,

2. the testing of models in basic and phased training,

3. the concentration of vocations where training can be given to apprentices through a redrafting of training regulations, and

4. the testing of new forms of instruction in vocational training, e.g. correspondence courses and programmed instruction.

The "Berufsbildungsgesetz" (vocational training law) created new legal and practical preconditions for reforms. They include regulations on the basis and content, as well as the beginning and end of the vocational training status, the regulation of vocational training in public law, the co-operation in the spirit of partnership and all those concerned in vocational training at State, Länder and Chamber levels, and research in vocational training.

In its action programme "Vocational Education" of 3rd November, 1970, the Federal Government delineated clearly the measures that have to be taken in order to improve the practical and legal conditions in vocational training on the basis of the currently valid legal possibilities. The action programme is directed to the same extent at trainers and those responsible for vocational training. In particular, the possibilities created through the "vocational training law" should be made full use of and brought into play in training practice. This applies in detail and in particular to the following measures:

1. The legal rulings on the qualification of instructors and on the training workshops should be realised fully and completely.

2. Through a new "Betriebsverfassungsgesetz" (Law on the Structure of Enterprise), the factory councils and youth representatives should receive co-determination rights and rights in shaping vocational training.

3. An amendment to the "Jugendarbeitsschutzgesetz" (youth labour protection law), of considerable importance for the training of young people has been planned. The Federal Government will support all projects, together with the Länder, that are suitable to make vocational school education more effective.

4. The Federal Government has begun to create new training regulations which replace many outdated vocations for which training is necessary through fewer more modern ones, and, where possible, to introduce phased training.

5. The Federal Government will give increasing support to the establishment and the expansion of industrial training workshop.

6. The Federal Governwent will, together with the Federal Office of Labour, modernise careers advisory services. In the State-Länder Commission on Educational Questions, it will work towards the introduction of vocational, industrial and economic subjects into the curriculum of schools providing general education.

8. The Tertiary Sector (Higher Education)

8.1 Higher education in Germany

The tertiary sector in Germany comprises the following types of institutions:

1. Universities, technical universities and institutions of similar status

   The universities, technical universities and institutions of similar status have a dual task: They prepare students for professions which require an academic training (doctors, secondary school teachers, lawyers, engineers, etc.) and they are at the same time required to do research. The link between training and research is characteristic of such institutions and governs the nature of training as well as the legal status of university teachers and students. This link is also apparent in the special legal status of the universities. On the one hand they are under the authority of the Länder, which are responsible for their financial support (investment costs are shared with the Federal Government), whilst on the other they are self-governing bodies with the right to organise their own courses of study and employ supplementary personnel.

2. Pädagogische Hochschulen (teacher training colleges)

   The Pädagogischen Hochschulen train teachers for the Grundschule and Hauptschule and sometimes for the Realschule. In some Länder teachers are trained in special departments and institutes of the universities. The Pädagogishen Hochschulen do research on the theory and methods of teaching. They are self-governing institutions financed by the Länder.

3. Academies of art, music, sport, and television schools

   These academies train students for professions in the various fields of art, music and sport, train teachers, and carry out research work. Nearly all of them are financed by the Länder and are self-governing, especially with the regard to courses of study. The schools of television established in Munich and Berlin in 1966/67 occupy a special position.

4. The Fachhochschulen

This category is at present being developed from the schools of engineering and the senior specialised schools of economics, etc. and thereby incorporated in the higher education sector. Their purpose is to provide advanced vocationally oriented training and carry out applied research. The status and structure of the Fachhochschulen is being adapted to those of other institutions of higher education in this field. They will have considerable powers of self-government and an appropriate organisational structure.

(Information on higher education finance is given in section II.11).

8.2 Extension of and changes in higher education

The present developments in higher education are largely the result of measures of university building and extension introduced in all spheres since 1949, the year the Federal Republic of Germany was founded. This extention work was continued extensively between 1960 and 1970 to cater for the growing number of students. During that period the number of students at the various institutions of higher education increased from 204,000 to 293,000 and those at Pädagogische Hochschulen from 33,100 to 68,000, while the student population at schools of engineering, which now rank as institutes of higher education, rose from 44,000 to 63,000. The governments had to give priority to the extension of school and university education in order to meet increasing social and educational needs. This expansive tendency required structural reforms in all spheres of higher education to cope with the growing organisational tasks and has led in recent years to the introduction of reforms aimed primarily at re-organising courses of study, changing teaching staff structures, and improving the administrative structures. These new measures gave rise to a special problem at universities and institutions of similar status as regards the question of preserving the traditional link between teaching and research. Consideration of ways and means of improving teacher training has led the Länder to give Pädegogische Hochschulen university status or integrate them in universities. And it is for this same reason that the Ingenieurschulen and Höhere Fachschulen are at present being transformed into Fachhochschulen

Taking into account further expansion in the sphere of education, more extensive reforms will be necessary in the tertiary sphere. Above all, the functions of these institutions will have to be more closely co-ordinated and courses of study re-organised. In several Länder appropriate legislation has already been introduced and the draft law on Higher Education (cf. III.2.7) prepared by the Federal Government is aimed at these improvements. Below is a more detailed survey of the main trends in the various sectors of higher education and the tendencies towards future reform.

8.3 Reform of higher education

8.3.1 Universities, Technische Hochschulen and similar institutions

Existing institutions in the Federal Republic of Germany:

Universities

Land/city	Number of students summer term 1970	Land/city	Number of students summer term 1970
Baden-Württemberg		Bavaria	
Freiburg i.Br.	11,362	Erlangen-Nuremberg	10,151
Heidelberg	11,573	Munich	26,451
Constance+	605	Regessburg+	2,551
Tübingen	12,005	Würzburg	8,701
Ulm	61		
Berlin		Hamburg	
University	13,250	University	19,225
Heese		Lower Saxony	
Frankfurt/Main	14,871	Göttingen	10,231
Giessen	8,047		
Marburg	7,848		
North Rhine-Westphalia		Rhineland-Palatinate	
Bielefeld+	389	Mainz	10,255
Bochum+	9,928		
Bonn	14,613		
Dortmund+	171		
Düsseldorf	1,535		
Cologne	18,099		
Münster	18,012		
Saarland		Schleswig-Holstein	
Saarbrücken	7,725	Kiel	7,730

+ newly established

Technische Hochachulen

Land/city	Number of students summer term 1970
Baden-Württemberg	
Karlsruhe	6,756
Stuttgart	7,559
Bavaria	
Munich (Technical University)	7,996
Berlin	
Technical University	8,865
Hesse	
Darmstadt (Technical University)	6,049
Lower Saxony	
Brunswick (Technical University)	5,098
Clausthal " "	1,545
Hanover " "	6,200
North Rhine-Westphalia	
Aachen	10,532

Other university-level institutions

Land/city	Number of students summer term 1970
Baden-Württemberg	
University of Mannheim (Economics)	4,637
University of Stuttgart (Agriculture)	1,210
Lower Saxony	
Hanover (Medicine)	447
Hanover (Veterinary medicine)	791

(There are a few schools of philosophy and theology which have not been given special mention here).

Below is a more detailed study of developments with regard to the organisation of studies, research and administration at these institutions.

8.3.1.1 Study reform

Courses of studies at the universities, Technische Hochschulen and similar institutions finish with either a state examination (for grammer school teachers, doctors, etc.) or a diploma examination (Diplomingenieur, Diplom-Volkswirt, etc.). Special importance attaches to doctorate courses, whose participants must usually have passed the state or diploma examination. The regulations governing state examinations, which are issued by the government, and the diploma examination regulations, which are adopted by the university and approved by the government, have a considerable bearing on the organisation of studies. They stipulate the subjects in which students are to be examined and also the standards required. The universities organise the courses they have to offer within the framework of these regulations and can draw up study schemes and rules within the context of which the student is free in his choice of subjects.

The examination regulations include guidelines as to the length of the courses, but they are for the most part non-binding. With the exception of medicine, they usually presume that courses will last for eight semesters. As a result of the general expansion in the sphere of higher education, the periods envisaged in the regulations were in many cases considerably exceeded as from 1955, partly due to the growing demand for university places, but partly also to the lack of organisation. This induced the Conference of Ministers of Education, together with the West German Rectors' Conference, to set up a "Commission for examination and study regulations" to consider these problems, initially as far as they affect courses leading to a diploma. The Commission was asked to review examination regulations with a view to streamlining requirements, rationalising courses of study, establishing a legal framework for examination procedures, and elaborating study schemes. The general examination regulations submitted by the commission establish a basis for the co-ordinated reform of existing regulations and study schemes. In this respect they help to give students a better preparation for their future professional activities and at the same time streamline courses of study. The commission's work has shown that there are two aims to be achieved by way of such reforms:

- In the first place, students could be examined in certain main areas of study which curricula would have to make allowance for and would remove much of the "excess weight" of examinations. This system would at the same time be in the interest of the student as he would be able to choose his areas of study from a wide range according to his interests and ability.

- Second, it would be a more democratic procedure to have a system whereby decisions of the examining board regarding admission to and the results of examinations would to a large extent be subject to review.

There was some difficulty in getting the skeleton examination regulations and model study schemes accepted in all cases. Accordingly, the Conference of Ministers of Education and the West German Rectors' Conference have for some time now being seeking a solution to the problem of resolving the difficulties in the transformation from skeleton regulations and model study schemes to the real thing. Various laws and bills have already been introduced by the Länder with these aims in view.

In May 1966, the Science Council adopted "recommendations for the re-organisation of university study". They show that in the Council's opinion it is essential that "study and research should be arranged in such a way that students can complete their training within a reasonable period of time and be well prepared for their future profession.". It therefore suggests that the training function of the universities should be redefined as follows:

- Courses of study for all students should end with the appropriate qualifying examination.

- Extension studies for students interested in and capable of doing research.

- Follow-up studies to enable former university students to refresh and extend their knowledge at certain intervals.

At its 113th plenary session on 22nd-23rd September, 1966, the Conference of Ministers of Education considered the recommendations submitted by the Science Council and expressed the view that the reforms recommended by the Council should be put into effect as quickly as possible in conjunction with the universities. These proposals have meanwhile had a considerable effect on all the institutions concerned with study reform, particularly the universities and the commission appointed to review examination and study regulations. The skeleton regulations and model study schemes drawn up or revised by the commission are based on four-years, in some cases even shorter, periods of study, and provide for intermediate examinations as recommended by the Science Council. They represent an attempt to keep fields of study within reasonable limits. The Council's suggestion that students should be given intensive individual guidance during the first phase of study is now being put into effect in the faculties or specialised departments of all institutions of higher education, either by deans or by other advisory bodies. Furthermore, the Conference of Ministers of Education and Science and the Federal Institute of Labour, is developing a system of large-scale study guidance, providing for the closest possible co-ordination of advisory activities between schools, universities and the Federal Institute of Labour.

The Science Council's recommendations on teaching have also been tried out, with the result that more work now takes the form of tutorials in nearly all subjects. The "tutor's programme" introduced by the Volkswagenwerk Foundation in 1968 has played an important part in this respect. The Council's proposal to have a study scheme for each subject has been put into effect in nearly all fields by the elaboration of skeleton examination regulations and model study schemes.

In the meantime, the Conference of Ministers of Education has been considering the possibility of establishing standard and hence more efficient teaching methods. The competent committee of the Conference of Ministers of Education has elaborated a plan for institutionalising university teaching methods which, with the approval of the Conference of Ministers of Education, is currently being discussed with the institutions and other bodies concerned. Finally, considerable preparatory work is already being done with a view to creating new forms of teaching and hence new training possibilities by means of correspondence study on the basis of "media in partnership". A committee set up by the Conference of Ministers of Education and representing all institutions concerned has submitted a draft plan. The extension studies recommended by the Science Council will help considerably to increase the number of academic personsonel. The fellowship programme regionally introduced by the Volkswagenwerk Foundation to promote doctorate studies and since taken over by the Länder has boosted the funds for this sphere of study and considerable amounts are also available for 1971. Drafts have been submitted for a graduate promotion law which will embrace doctorate and other post-graduate studies. Some universities have introduced follow-up studies on the recommendation of the Science Council for doctors and secondary school teachers, especially those teaching mathematics.

8.3.1.2 Reform of research

Together with the institutes of the Max Planck Society for the Promotion of the Sciences, the industrial research institues and the research centres sponsored by the Federal and Länder Governments, the universities, technical universities and other institutions of higher education are the principal research establishments in the Federal Republic of Germany. Research at the traditional universities does not merely create the scientific basis for the fulfilment of the university's teaching mandates, but embraces all forms of research ranging from basic to applied research. The importance of the institutions of higher education in the whole development of research is principally that they train academic personnel in nearly all fields of science. The advantage of combined research and training at the university, both for academic personnel and students in general is that new knowledge and working methods can be directly passed on, new courses of study (e.g. biochemistry and information research) introduced as necessary, and new organisational forms, such as the system of extension studies whereby the emphasis is switched from training to research, are being developed.

There are two channels for the promotion of research at institutes of higher education. The Länder finance the basic equipment and personnel establishment, while the German Research Association, which administers Government funds for the promotion of science, gives financial support for specific research projects at the universities. For this purpose it has two programmes. There is the normal procedure whereby the university teachers themselves largely determine the research work to be done, and the system by which large-scale projects requiring the participation of several institutes and research teams are promoted.

An organisation in which the relevant university departments and also the Federal and Land authorities are represented, the German Research Association which ensures an expert selection of research projects for promotion. At the same time it is possible to give consideration to government interests in connection with research projects of public interest. In recent years structural problems have become very prominent with regard to the organisation and planning of research. On the one hand, the universities embrace a very wide spectrum of research activities which should be retained to ensure the comprehensive development of learning. However, these problems have assumed such proportions that they can no longer be mastered by the traditional methods of research. This was one of the reasons for the establishment of so-called "priority research areas". This system envisages a greater concentration of academic personnel, more co-operation among research staff from various fields of study and among university research departments and extra-university research centres. It will make for a more systematic co-ordination of specialised research and greater efficiency, increase government support for research promotion efforts, and allow the research projects financed in this way to be subject to review as to their value.

Priority areas of research are therefore institutions of the universities, but they are not governed by university divisions into faculties, departments, institutes, etc., and they are not dependent on any one university. Scientists and scholars from all research centres and departments, including those belonging to industry, may participate in these projects if they have substantialcontributions to make to the defined subject of research. These priority areas are not established for a specific period of time nor for the lifetime or period of office of any particular scientist, but for as long as they are productive. They are institutionalised as there must be a system whereby the participation of the research workers, the discussion and elaboration of scientific aims and working methods, as well as the possibilities of efficiency controls and appeal, can be regulated. But this does not imply the building of new central institutes. The research workers participating in such sponsored projects will still belong to their respective university departments. The priority areas rely on the participation of the research staff employed in the fields of research which they cover. The members of the area team act as spokesman in rotation and determine their scientific and financial affairs independently. The process of decision-making does not, as is otherwise the case in the universities, depend on the status of the individual scientist. In actual fact all participants are on the same footing, irrespective of their position in the university. Priority areas of research are established pursuant to "procedural regulations" issued by the Science Council, either upon the application of a university or following proposals by the Federal or Land governments, the Max Planck Society, or the German Research Association. Applications and proposals are submitted to the German Research Association which examines the plans and makes a recommendation to the Science Council. Under the procedural regulations, the Council cannot recognise priority areas of research unless they have been recommended by the German Research Association.

In 1968, the Science Council recognised 141 priority areas of research out of 360 applications from the universities and drew up a catalogue of them. Another eight were added to the list in January 1969 and twenty more in November 1970. The Science Council has gradually allowed these areas to apply for the necessary funds and 98 have already been catered for. Further additions are proposed by the German Research Association. Both the catalogue of recognised priority areas of research and the smaller list of those entitled to apply for financial support embrace all fields of university research (see Annex 36).

The financing of these priority areas is the responsibility of the Deutsche Forschungsgemeinschaft (German Research Association) and the necessary funds are appropriated in the Federal and Länder budgets. The Federal and Länder Governments have concluded an administrative agreement on this question and are represented in the committee of the German Research Association which approves applications. The Association invites the appropriate body of the area of research to submit an application every February and decides after thorough appraisal by the beginning of December of the following year at the latest. In some cases it approves funds for periods of up to three years at a time. With the aid of consultants it hopes to examine each priority area of research about every three years as to its scientific productivity, to be linked with a cost/efficiency analysis as soon as appropriate methods have been developed.

The German Research Association has drawn up the following criteria for the examination of newly registered priority areas of research and also for the appraisal of applications for financial support:

- Each priority area must have an institutional structure and qualifies only if adequate financial support cannot be obtained from any other source, as, for instance, under the Association's ordinary facilities.

- There must be an assurance that priority areas will receive continuous attention.

- They must not be so extensive as to jeopardise co-operation among the research institutions concerned.

- Again, it is not merely a question of adding together a number of university research departments; there must be a genuine mutual interest in combined research. The method of co-operation must be clearly defined and there must be a verifiable basis for joint research in priority areas.

- The research programme must be such as to justify the granting of financial support for an institutionalised priority research area.

- The basic facilities must be available and their long-term financial requirements assured.

- The area in question must hold out good scientific prospects.

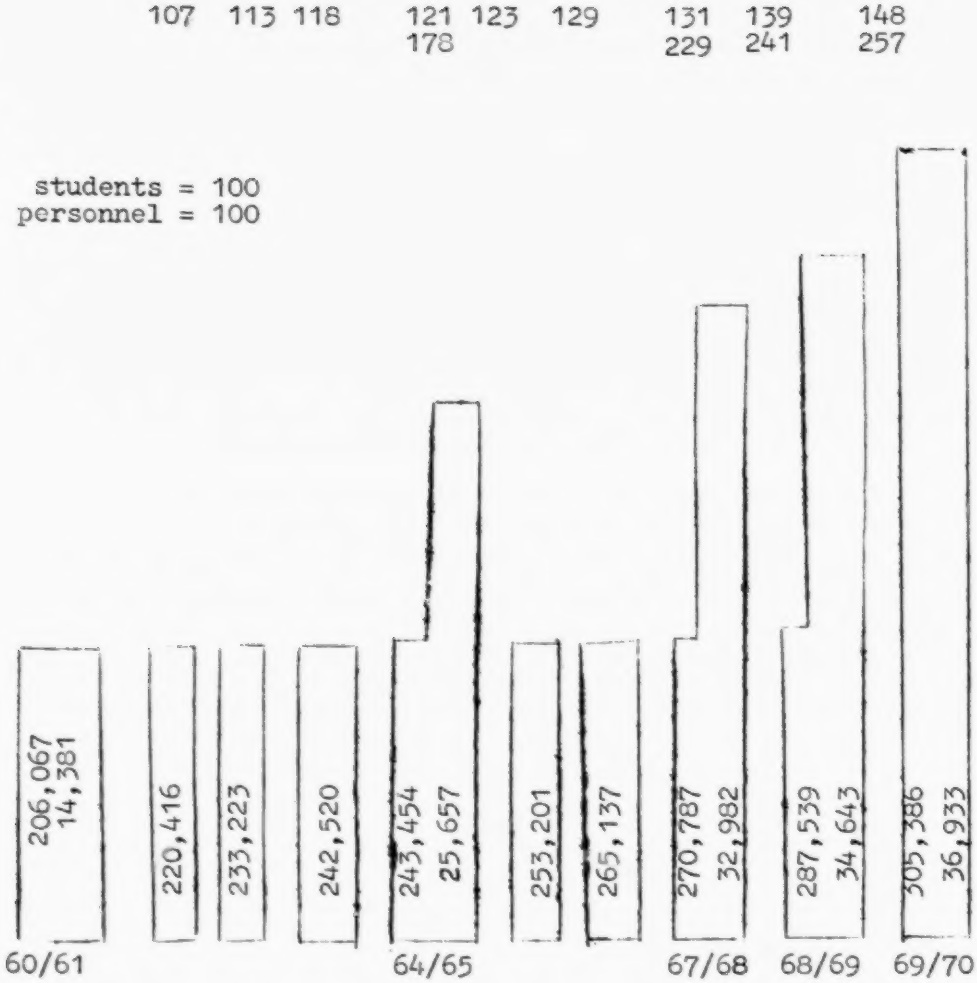
Grants from the German Research Association are intended to cover the supplementary requirements of the priority area of research which exceeds the limits of the regular university budget. All types of expenditure may be met from the funds provided by the Association, with the exception of building or the renting of substitute accommodation. Up to now the proportion of expenditure has been roughly as follows: 50 per cent personnel costs; just under 25 per cent on material administrative costs, and a good 25 per cent for capital expenditure (excluding buildings). Now that the need for initial capital expenditure has more or less been satisfied, the proportion of personnel costs is rising whilst administrative costs are more or less the same. Priority area financing began at the end of 1968, since when expenditure has been as follows: 1968, DM 4.5 million; 1969, DM 20.3 million; 1970, DM 64.2 million, and 1971, approximately DM 105 million. Up to now grants have been given to 77 priority areas.

8.3.1.3 Changes in the structure of teaching staffs

Since 1960, a number of overlapping circumstances have affected the structure of the universities. They are especially:

- The considerable changes in the methods of research as a result of generally widening spheres of knowledge which in turn stem from the need for inter-disciplinary co-operation, as well as from the improvement and increase in the number of research institutions.
- With the constant growth of the student population the existing distribution of teaching responsibilities could not be left unchanged.
- Courses of training had to be re-organised (cf.8.3.1.1.).
- The number of middle-grade posts (supernumerary professors, heads of departments, academic research assistants, lecturers) was considerably increased to meet the demand for highly qualified academic personnel. These middle-grade staff assumed a greater role in teaching and research and were thus important for their development.

For these reasons, personnel establishments had to be increased considerably to maintain the standard of teaching and research. The proportionate increase in academic personnel was greater than in the case of students. Their number rose almost one and a half times between 1960 and 1968, whereas the number of students increased by only one half. If one were to take 100 as the norm for 1960, then the corresponding figures for scientific personnel are: 1964: 178, 1967: 229, and 1968: 241. The following diagram indicates the relative personnel developments.



University students and academic personnel 1960 to 1970

Sources: General university statistics quoted from the recommendations of the Science Council on the structure and extension of higher education after 1970, vol. 3, pp. 54 and 80 (students 60 - 70; academic personnel 1969). The Enlargement of University Staffs 1960 - 1968, published by the Secretariat of the Conference of Ministers of Education, IIB - 1/70.

Norms: (60 ≙ 100)

absolute figures	absolute figures
students	academic personnel

The necessary diversification of funtions at middle-grade level meant that the spectrum of different posts widened accordingly. At the same time, an increasing proportion of independent teaching and research activities was delegated to other sections of the academic staff. As a result of the growing demand for university teachers and greater specialisation in research it has become more and more necessary to accord new functions to assistant professors, especially in teaching.

The following table shows the changes in the structure of academic personnel at the universities during the sixties.

Structure and Growth of Academic Personnel

at Universities between 1960 and 1968(1)

Year	Professorships			Middle-grade staff			Assistant professors			Total		
	abs.	norm	ratio	abs.	norm	ratio	abs.	norm	ratio	abs.	norm	ratio
1960	3,098	100.0	21.5	2,058	100.0	14.3	9,225	100.0	64.2	14,381	100.0	100
1964	4,312	139.2	16.8	5,232	254.2	20.4	16,113	174.7	62.8	25,657	178.4	100
1967	4,861	156.9	14.7	8,143	395.7	24.7	19,978	216.6	60.6	32,982	229.3	100
1968	4,988	161.0	14.4	8,755	425.4	25.3	20,900	226.6	60.3	34,643	240.9	100

(1)Source: The Structure of University Personnel between 1960 and 1968, statistics published by the Secretariat of the Conference of Ministers of Education, IIB/ 1-70.

Developments in the sixties were largely determined by the recommendations of the Science Council on the extension of academic institutions, dated November 1960, and on the re-organisation of teaching staffs at universities, dated 21st November, 1964. With certain additions, the Conference of Ministers of Education adopted these recommendations.

Since about 1966, attention has been given to the restructuring of university staffs, chiefly in accordance with special recommendations adopted by the Science Council in 1964. As a result, the following steps have been taken:

- Parallel professorships have been established in different fields of study to cope with the growing number of students and to make for increased specialisation in teaching and research. As a part of this process, many of the extraordinary professorships created since 1925, originally to meet the demand for highly qualified personnel, have been converted into full professorships.

- Posts have also been created for "academic counsellors" and departmental heads authorised to conduct long-term research and teaching activities and thus ease the professor's burden of work.

- Counsellors have been assigned in particular to teaching (e.g. language tuition) "which while it must be up to university standards cannot be performed by the professors and lecturers ... without their having to sacrifice the time they need for research and other teaching." Their services have also been placed at the disposal of research establishments.

- Other personnel with special qualifications, such as senior schoolmasters and judges, have been seconded to universities for periods of between two and four years.

Although these measures have considerably reduced the shortage of staff in these fields, they have met with increasing criticism, especially with regard to middle-grade personnel.

Since 1968, many new proposals have been put forward by various bodies such as the Conference of Ministers of Education, the Science Council, the Federal Ministry of Education and Science (in its draft law on higher education), the West German Rectors' Conference, the Universities' Association, and the Federal Conference of University Assistants. Some of them have already been incorporated in the legislation of the Länder. There exists agreement on the following general aims:

- All teachers permanently attached to the university should carry the title "professor". This covers most of the middle-grade personnel also, and in spite of the different functions performed by academic staff, administrative work relating to teaching activities, remuneration, etc., has been simplified and more clearly defined.

- On 4th October, 1968, the Conference of Ministers of Education proposed in their "Principles for the introduction of modern university legislation and the restructuring of the higher education system" that vacant professorships should be advertised and that in making appointments only the personal emoluments of the candidate should be the subject of agreement. These proposals have meanwhile to a large extent been adopted.

New types of assistant professors are envisaged who will be attached to a particular department or field of work, not to the professor. Such assistant professors will hold their posts for 5-6 years at the most. The purpose of this system is to enable young academic personnel to prove their qualities in research and teaching after their field of activity has been more clearly defined. As a result, "Habilitation", the traditional gateway to professorial status, will no longer carry the same weight. In future the criteria for appointment will be the ability to do independent research, a standard candidate will normally be deemed to have attained this upon being awarded his doctorate, and teaching aptitude.

- Posts will be created for academic staff who will be responsible for academic services at the universities.

8.3.1.4 Changing organisational structures in the sphere of higher education

At the classical universities teaching and research in the various fields of study were the responsibility of the institutes, which in turn were grouped in faculties which co-ordinated teaching and research. They comprised numerous, sometimes heterogeneous, disciplines. The university consisted of the faculties of theology, law, economics and social science, medicine, arts, and science, and has a central body (senate, convention, council) composed of the staff responsible for teaching and research. It elected the rector for a twelve-month term of office.

However, the increasing number of students and, consequently, of teaching staff, together with the growing diversification of academic posts and responsibilities, made it impossible for the faculties to perform their functions to the same extent as before. In addition, it had become increasingly necessary to co-ordinate inter-disciplinary co-operation. In order to avoid the danger of institutes going their separate ways and faculties becoming less efficient, the Conference of Ministers of Education proposed in its Principles for modern higher education legislation (10th April, 1968) that professorships and institutes should be grouped together to form efficient basic units (specialised areas, departments, small faculties) which would receive the personnel and facilities to meet their teaching and research requirements. The recommendations of the Science Council (December 1968) point in the same direction, and all of the state laws enacted or drafted envisage such re-organisational measures.

More self-government for the universities and the growing task of co-ordination has placed heavier demands on the head of the university and made it necessary to ensure greater continuity of office. In order to meet this need, the Conference of Ministers made provision in 1968 for a presidial system or prolongation of the rectorial period of office. At present several systems are applied, but all have the same aim of giving the principle wider scope for his work and securing a larger degree of continuity.

There are, in addition, the central collegiate bodies with varying responsibilities depending on the legislation of the individual Länder. However, they all elect the university principal and decide on constitutional matters. The senate, on the other hand, is a central co-ordinating organ for the various departments, and in some cases performs decision-making functions.

8.3.1.5 Participation in self-government

The participation of students and assistant academic staff in university self-government was a central issue which coincided with the re-organisation of higher education. Two different trends have emerged in this respect. First, in many sectors of society all groups have in recent years been demanding, with different motives, a bigger say in the decision-making process. The student population in particular have to a large extent based their arguments on trends in this direction outside the university. Second, the changing pattern of study, research and personnel has meant that part of the responsibility for research and teaching has been transferred to other than the traditional categories, with the result that they too want to play a bigger part in policy development. The groups demanding these changes called without exception for the parity composition of governing bodies ("one third parity", "half parity", etc.). The resolution on modern legislation for higher education adopted by the Conference of Ministers of Education has had considerable influence on the political discussion which this question has involved. The resolution reads: "The groups, including students, concerned with teaching and research should be assured of appropriate participation in the academic organs commensurate with their functions." The object, therefore, was to ensure qualitative participation as it was felt that without differenciated participation there could be no proper solution. This viewpoint was shared by the West German Rectors' Conference. In their May 1968 resolution on the "criteria for the quantitative representation of university members in its organs of self-government" they emphasised that the extent of participation depended also on the length of time the person concerned spends at the university and the nature of his association with it, and hence his interests. The organs of self-government now comprise the professors and assistant professors, middle-grade personnel of non-professorial status, the student body and the non-academic staff. The existing legislation generally provides for the participation of students and other groups in the co-ordinating, advisory and decision-making bodies, though the size of their representation, also in relation to each other, differs considerably.

8.3.1.6 University extension and new building projects

As a result of the constant rise in demand for university places, the existing universities have had to be extended, both physically and in terms of staff and courses offered. Over the past twenty years or so most universities have therefore doubled their capacities, but as they, like other institutions, cannot expand beyond a certain size, there is a limit to extension measures. A number of universities have already reached that optimum limit, which of course differs from case to case depending on the type of institution, the size of the city, the courses offered, and the organisational structure. However, as, for the reasons stated above, extension could not keep pace with demand, the Science Council repeatedly recommended the establishment of new institutions of higher education.

Between 1961 and 1970, plans were adopted for the building of new universities at Bochum, Regensburg, Dortmund, Constance, Bremen, Bielefeld, Ulm, Augsburg, Trier-Kaiserslautern, and Kassel, as well as schools of medicine at Hanover and Lübeck, and a clinical hospital at Essen. The progress achieved up to now is as follows (figures in brackets indicate number of students in winter semester 1969/70): Bochum (9,856), Regensburg (2,450), Dortmund (144), Hanover School of Medicine (429), clinical hospital Essen (included in number for Bochum), Constance (669), Lübeck school of medicine (300), Bielefeld (270), Ulm (62).

Social and regional studies had shown that the uneven representation of different sections of the population was the result of the location of the universities. Thus the new institutions were planned for areas that had previously been inadequately catered for. At the same time, new organisational structures have been tried out, with different aims and priorities. Some of the following changes have also been incorporated in the appropriate laws:

- traditional faculty system superseded by a division into departments and specialised areas of study with the emphasis on inter-disciplinary co-operation;

- re-arrangement of studies, courses embracing several fields of work, introduction of extension studies (especially at Constance);

- wider university self-government assured by revised methods of allocating funds for material and personnel;
- presidial instead of rectorial system, or extended rectorship;
- new links between medical research and care of the sick at schools of medicine.

8.3.2 Pädagogische Hochschulen

The Pädagogische Hochschulen are institutions which primarily train teachers for Grundschulen and Hauptschulen. They afford a three-year course of study ending with a first state examination. In some of the Länder special courses have been introduced pursuant to general regulations issued in 1969 by the Conference of Ministers of Education and the West German Rectors' Conference leading to a diploma in education and opening up new professional avenues.

In recent years the structure of the Pädagogische Hochschulen, their legal status and staff composition, have been increasingly adapted to the university set-up to improve the technical quality of teacher training. Today they take the form either of an academic institution (as in North Rhine/Westphalia) or of a university department (Hesse). In some areas (e.g. Bavaria) they may be affiliated to a university. With a view to the future teacher requirement and to improving training, academic posts at the Pädagogischen Hochschulen have been increased from 1,386 in 1960 to 3,502 in 1969. The stimulus for this development came from the Conference of Ministers, who in June 1963 called for more teacher training establishments. During that period the number of students rose from 33,100 to 68,800. The need for greater diversification and specialisation has been largely responsible for the creation of new staff posts to cover new fields of teacher training. Furthermore, research activities at these institutions are increasing.

8.3.3 Fachhochschulen

Apart from the well established types of institutions which lead to professional qualifications, i.e. the universities, technical universities and Pädagogischen Hochschulen, there are higher level institutions which likewise provide profession-oriented training. They are the Ingenieurschulen, Höhere Fachschulen und Akademien which embrace the following fields: engineering (civil and mechanical engineering, processing and materials technology, equipment construction, surveying, etc.), economic affairs, including industrial management, welfare work and social pedagogics, design and production, rural engineering, navigation, translating and interpreting, etc.).

Previously, their function was to provide higher level technical training for people entering practical occupations. The entrance requirement was a course of secondary education up to the tenth class or a certificate qualifying the holder for the Fachschule, plus a two-year period of practical training with an undertaking. Courses usually lasted for three years and ended with a state examination. Successful examinees were awarded an engineering degree (Ingenieur-Grad).

In terms of numbers of students and teaching staff the Ingenieurschulen and Höhere Wirtschaftsfachschulen formed the largest category. The growth of state and state-recognised institutions in this category has been as follows:

(Federal Republic including Berlin)

Winter semester	Number of institutions	Number of students
1960/61	91	44,000
1962/63	102	51,500
1963/64	110	54,900
1964/65	125	58,000
1965/66	131	60,700
1966/67	138	62,000
1967/68	140	61,500
1968/69	143	63,500

Source: Surveys conducted by the Conference of Ministers of Education.

The personnel establishment of Ingenieurschulen has increased from 2,502 in 1960 to 5,300 in 1970. The number of Höhere Wirtschaftsfachschulen rose from 9 in 1961 to 24 in 1969, and of their students from 917 to 7,555.

Training in these sectors is at the moment the subject of comprehensive reform in view of the changing professional requirements and is a consequence of measures to harmonise engineering training within the European Economic Community. In nearly all departments the existing institutions in this sector are being transformed into Fachhochschulen, admission to which will be via the new type of higher technical school, the Fachoberschule (cf. Part II 5.2.3.2.), which will award the qualifying certificate (Fachhochschulreife). This sector of higher education has been re-organised on the basis of an agreement between the Länder (31st October, 1968) "to achieve uniformity in the field of Fachhochschule education", and of a general agreement on the new system of Fachhochschulen concluded on 6th February, 1969, by the Conference of Ministers of Education. In the meantime co-ordinated measures for the establishment of Fachoberschulen and Fachhochschulen are being implemented in nearly all Länder, and the transformation of Ingenieurschulen, Höhere Fachschulen and Akademien into Fachhochschulen will everywhere have been completed by 1st September, 1971 at the latest.

According to the 1968 agreement between the Länder, the aim of the Fachhochschule should be "to provide on a scientific basis courses of education leading to a final state examination and developing in graduates the ability to carry on their professional activities independently". It is clear from this that there is to be a shift of accent to theory and method, though without jeopardising the existing special relationship between training and practical application. The trend in this direction is also evident from several laws relating to the Fachhochschulen which explicitly state that application-oriented research should be one of the tasks of the Fachhochschule, provided it serves the aims of training. Thus the courses offered by the Fachhochschule will differ in character from the practice-oriented training given up to now, and also from those of the universities, which are for the most part theory-oriented.

Courses will last for three years with each academic year comprising at least 220 days and methods and organisation suiting the purposes of the Fachhochschule. Those parts of the system used at the Ingenieurschulen, etc., which have proved effective will be retained, but in the selection of subject-matter, presentation and the solution of problems greater emphasis will have to be placed on the theoretical aspects of training. It will also be necessary to encourage individual initiative and thus interest students in pursuing further studies independently. It has not yet been decided whether the practical training afforded by the Fachoberschule should be supplemented at the Fachhochschule. Courses will end with examinations and the award of degrees, irrespective of whether the examinations are state-recognised for there is no uniform system in the Länder. Students at the Fachhochschule may, after a preliminary examination in their field of study and after passing their final examinations, continue their studies at a university.

In such cases the recognition of the student's study and examination performances needs no further clarification. The aim is to facilitate transfer to the university and increase the permeability of the whole training system by co-ordinating university and Fachhochschule studies.

The specialised institutions of higher education (Fachhochschulen) will have a new category of teachers differing in status and remuneration from those at the engineering colleges, higher technical schools and academies. In all Länder the new teachers will be known as "Fachhochschullehrer" (in some cases "Dozenten"). New posts and vacancies will be advertised and selection procedures will correspond to the university system of appointments. In this process applicants' technical and teaching qualifications will also be assessed. Salary scales have also been reviewed in order to make higher education more attractive to people from industry.

In view of their purpose and reformed staff structure the Fachhochschulen will have a large measure of self-government, chiefly as regards syllabuses, consultation in the appointment of supplementary teaching staff, and budgetary matters. The composition of their organs will be on a representational basis, whilst the organisational structure, with certain variations from Land to Land, will incorporate a general assembly, council or convention for constitutional matters, election or voting out of office of the rector or president; a central organ (senate, board) for general matters; and the president or rector, who will hold office for periods of between three and nine years, depending on the Land. Directly responsible for training are the Fachbereiche or specialised areas which have a Fachbereichsrat (board) under a director or chairman elected by the board from among the teaching body. In some Länder special committees or commissions will handle questions such as study reform and inter-disciplinary co-operation.

8.3.4 Colleges of art and sport, film and television academies

The Kunsthochschule in the Federal Republic of Germany embraces the colleges of fine arts, music, or music and dramatic art. Although their functions differ they have much the same structure and can therefore be considered together.

(a) Colleges of fine arts

Staatliche Hochschule für bildende Künste, Berlin.

Staatliche Hochschule für bildende Künste, Brunswick.

Staatliche Kunstakademie, Düsseldorf, Hochschule für Bildende Künste.

Städelschule - Staatliche Hochschule für Bildende Künste, Frankfurt a. Main.

Staatliche Hochschule für bildende Künste Hamburg.

Staatliche Akademie der bildenden Künste Karlsruhe.

Staatlisches Hochschulinstitut für Kunst- und Werkerziehung Mainz.

Akademie der bildenden Künste in München.

Staatliche Akademie der bildenden Künste Stuttgart.

(b) Colleges of music

Staatliche Hochschule für Musik und darstellende Kunst, Berlin.

Staatliche Hochschule für Musik Detmold.

Folkwang Hochschule Essen - Musik Theater Tanz.

Staatliche Hochschule für Musik Freiburg im Breisgau.

Staatliche Hochschule für Musik und Darstellende Kunst Hamburg.

Staatliche Hochschule für Musik und Theater Hanover

Staatlich anerkannte Hochschule für Musik und Theater Heidelberg.

Badische Hochschule für Musik Karlsruhe.

Staatliche Hochschule für Musik Köln.

Staatliche Fachhochschule für Musik- Schleswig-Holsteinische Musikakademie und Norddeutsche Orgelschule Lübeck.

Städtische Hochschule für Musik und Theater Mannheim

Staatliche Hochschule für Musik in München.

Musikhochschule des Saarlandes

Staatliche Hochschule für Musik und darstellende Kunst Stuttgart.

These colleges prepare students for their future professions whilst at the same time developing and exploring new methods of artistic and musical presentation. They have moved closer to the traditional universities in many fields and this in particular will influence discussion on the future legal status of these institutions in relation to the universities and their integration in the overall sphere of higher education (Part III 8.4.2 and 8.4.3).

Courses at the colleges of music end with either an examination leading to a music profession or a state examination qualifying for teaching posts with civil service status. At the colleges of art examinations are set for prospective teachers only. Other students are awarded certificates according to their performances. The entrance requirements vary depending on the student's ultimate goal. Those who wish to study art and music education must have obtained the qualification for university entrance and be artistically gifted. Participants in other courses must be at least 17 - 18 years of age and possess above-average talent. At some institutions an entrance examination has to be taken, at others the first term is treated as a trial period. Student expansion at colleges of art and music has been as follows:

WS	1965/66	7,987
WS	1966/67	8,212
WS	1967/68	8,356
WS	1968/69	8,579
WS	1969/70	9,213

(Source: Federal Office of Statistics, "Kleine Hochschulstatistik")

The colleges of art and music are, apart from a few exceptions, financed and supervised by the state. The functions and rights of these institutions are guaranteed by article 5 (3) of the Basic Law (Constitution) and the corresponding provisions of the Land constitutions, which explicitly guarantee freedom of art. Hence the colleges are free in their artistic work and enjoy a large measure of self-government. They have collegiate bodies with the right to appoint supplementary staff, organise courses of study, and draw up draft budget estimates. The principal is a rector, director or president.

The Deutsche Film- und Fernsehakademie was founded in Berlin on 15th September, 1966 under the joint sponsorship of Land Berlin and the Federal Government. It trains for the most part students wishing to enter "production professions" (directors, cameramen, directors of photography and production, etc.). The artistic ability of would-be students is assessed by means of an entrance examination. In the first year film history is the dominant subject. In the second year the various branches of the industry are studied and at the end of the year students are required to take a preliminary examination. Then follows the final period of specialisation involving theoretical and practical work and ending with a diploma examination.

Its sister academcy, the Hochschule für Fernsehen und Film in Munich, was opened on 6th November, 1967. It has the status of a college of art under Bavarian law and trains producers, directors and programme directors in all branches, apart from conducting research activities. The qualification for entry is immatriculation, but exceptions may be made where the applicant proves to have exceptional talent. Final certificates are awarded.

There are two colleges of sport: at Cologne (1,300 students) and at Munich-Grünwald (500 students). They train sports teachers and pursue research in all branches of sport. Some of the universities and technical universities have departments of sport which likewise train teachers.

3.4 Re-organisation of Higher Education

3.4.1 Syllabus co-ordination in the entire tertiary sector

In recent years it has become increasingly apparent that one of the most important tasks in the field of higher education is to recognise the inter-relation between the existing institutions and to develop them into an integrated whole, the tertiary sector. One of the main problems here is co-ordinating various courses of study and forming one organic and permeable system of higher education. To achieve this aim two criteria have to be taken into account: re-organisation must allow for the individual interests of students and the specific requirements of the professional fields they will be entering, and it must enable the institutions of higher education to fulfil their functions more effectively. Up to now a certain amount of permeability has been achieved by increasing the possibilities for transfers between different institutions and by counting periods of study and examinations obtained elsewhere towards the new course of training. Transfers from the engineering colleges to the technical universities used to be the biggest problem, but the Länder, by virtue of a decision of the Conference of Ministers of Education of 12th - 13th March, 1970 with a view to reforming training at and leading up to the engineering colleges, have introduced new regulations which create considerably more possibilities for transfers from such colleges or Fachhochschulen to the technical universities. However, if such an organic system of overall higher education is to ensure a differentiated relationship between teaching and research (cf. recommendations of the Science Council on "the structure and development of higher education after 1970", vol. I p. 22) the question of the permeability and co-ordination of studies will have to be based on a re-organisation of training in individual branches of study. There are four possible models for a restructuring along these lines:

(a) A fully consecutive system of study, i.e. a general course for all until the professional qualification has been acquired, with the possibility of proceeding to post-graduate research-oriented studies.

(b) A vertical arrangement under which studies would be attuned to the functions of several institutions, the difference being that there will be wider opportunities for students to transfer to related or co-ordinated fields whilst having their periods of study and examinations recognised.

(c) A mixture of (a) and (b), e.g. a two-year basic course for all followed by twelve months' application-oriented training in a specialised branch then a final two-year period of research-oriented study.

(d) The "Baukastenmodell" (construction unit principle), a system in which the student can opt for specific sections of courses which are complete in themselves and, with the necessary guidance, can be fitted together to form an overall course that is suited to the student's needs and in content are aimed at a professional objective or are more academic-oriented.

The Conference of Ministers of Education are currently considering the feasibility of these models. The decisive factors in this connection are the present and future professional requirements and definitions and the capacity of and possibilities open to tertiaty sector institutions. Special importance will therefore attach to a wide-view appreciation of all courses of training and their place in a well-defined system (more application-oriented courses of about three years' duration and more research-oriented courses lasting about four years).

8.4.2 Inter-institution co-operation in the tertiary sector

If studies are to be co-ordinated on the principle of permeability close co-operation among the various institutions of the tertiary sector will be necessary. There has already been a certain amount of co-operation between the teacher training colleges and universities on matters concerning teacher training and, to a less extent, between the engineering colleges (the future Fachhochschulen) and the technical universities. In some of the Länder institutional links have been created between the teacher training colleges and the universities with a view to facilitating such co-operation which, depending to a large extent on local conditions, usually extends to the mutual supplementation of lectures and the general discussion of training problems. True co-ordination embracing the whole sphere of higher learning will require much wider co-operation within a more institutionalised framework. For this reason the recent laws relating to the universities and Fachhochschulen adopted by the Länder specifically oblige the various institutions to co-operate with each other in planning courses of study. In fact some of them also provide for the establishment of joint organs for this purpose at local and Land level.

8.4.3. Comprehensive universities

The plans for comprehensive universities go further than the co-ordination of studies along the lines described above. The comprehensive universitiy is a new type of institution embracing a number of tertiary sector institutions, with quite extensive co-ordinating and planning functions, especially with regard to teaching and research.

The first plans for such system were developed in Baden-Württemberg (of Outline Plan for Differentiated Higher Education-Hochschulgesamtplan I adopted by the government of Baden Württemberg on 15th April, 1969, Publications Series A, No. 18). Similiar plans have been developed in other Länder and the statutory basis for their implementation created. In their recommendations on the structure and development of higher education after 1970, the Science Council also support the idea of comprehensive universities, especially in view of the "growing number of people seeking higher education" (vol. 1, p. 25).

Two types of organisational structure come into consideration:

(a) The co-operative form of comprehensive university with the existing institutions retaining their autonomy but having joint bodies to co-ordinate teaching, research and administration.

(b) The integrated form merging hitherto independent institutions into one unit. The wide powers of its central organs would likewise extend to teaching, research and administration.

The Federal Government's draft skeleton law on higher education envisages the integrated form as the standard type of institution (cf. III.2.7), which is also recommended by the Science Council. It has been pointed out, however, that the principle objectives of the comprehensive university can also be achieved using the co-operative system.

8.5 Planning and Finance in the Tertiary Sector

Originally, the Basic Law (Constitution) placed the responsibility for legislation and administration in the sphere of higher education solely in the hands of the Länder. Consequently, financial matters were also their affair. This was the situation until 1952, when the Federal Government began to take on part of the financial burden, though only a negligible proportion up to 1956 (1953: 0.2 per cent, 1954: 0.5 per cent, 1955: 0.8 per cent, 1956: 2.3 per cent). This means that the main burden of rebuilding the destroyed German universities was borne by the Länder.

After 1957 the Federal Government increased its financial support, particularly as from 1958, when it began to contribute to the cost of building and initial equipment, its share of total expenditure rising from 10.2 per cent to 17.5 per cent in 1969. Thus, apart from a small proportion contributed by the local authorities, the Länder provided 81.8 per cent of total funds.

There was no formal legal basis for the Federal Government's participation until 4th June, 1964, when an administrative agreement for the promotion of education and research was concluded with the Länder. Both undertook to continue their joint efforts to extend the sphere of university education on the basis of the recommendations of the Science Council and between them to provide DM 500 million annually for this purpose between 1964 and 1966.

That agreement was extended on 8th February, 1969 and the annual amount to be made available increased.

Both these agreements merely concerned the financing of the extension of existing universities. To meet the cost of new universities the Länder signed an agreement on 4th June, 1964 which provided for the setting up of a common investment fund. Amendments to the Basic Law, first on 12th May, 1969 (cf. I) relating to the universities only, then on 5th August, 1968 embracing all institutions of higher education, made the Federal Government and the Länder jointly responsible for extension projects and new buildings. Article 91a of the Basic Law stipulates that each will bear half of the costs.

This constitutional amendment led to the enactment on 1st September, 1969 of a law on the joint task of extending and building universities which set out the projects envisaged and the mode of financing. This law was amended on 3rd September, 1970 pursuant to the constitutional amendment of 5th August, 1970 and extended to all institutions in the tertiary sector. An important innovation under that law was the appointment of a planning committee for new buildings. Even under this new legislation the Federal Government's financial participation was limited to sharing the cost of building and equipment. The Länder were still responsible for upkeep and maintenance.

At first, planning was the task of the Länder but the need for overall planning at federal level soon became apparent. This led to the birth of the Science Council in 1957 which was directed to draw up an overall plan for the promotion of the sciences on the basis of the plans submitted by the Federal Government and the Länder which it was to co-ordinate. It was also asked to elaborate a priority programme every year and to put forward recommendations for the use of the funds appropriated in the budgets of the Federal Government and the Länder, who undertook to make allowance for the recommendations of the Council in their budget estimates.

The principle recommendations of the Science Council are those on university extention (1960), on the development of institutions of higher education up to 1970 (1967), and on the structure and development of the tertiary sector after 1970 (May 1970). These recommendations contain detailed proposals for extension projects and have been incorporated in Federal Government and Länder plans.

The University Building Promotion Law (cf. III.2.7) has introduced a new system of joint planning in this sphere. It provides for a planning committee, on which the Federal Government and the Länder are equally represented, to draw up a joint skeleton plan for the extension and building of institutions in the tertiary sector. The first skeleton plan is in preparation and will state the aims, the current level of development and extension, the individual building and procurement projects, other undertakings which initially will not be taken beyond the planning stage, as well as the amounts to be made available by the Federal Government and each Land. The Science Council will act as an advisory body and the plan will begin to have effect on 1st January, 1972. Another important body is the joint commission for educational planning establishment by the Federal Government and the Länder pursuant to the administrative agreement of 25th June, 1970 (cf. Part I). In recent years, other institutions, too, have intensified their planning in the tertiary sector.

Extension and development in higher education require to a very large extent the application of modern planning methods. This has been most clearly apparent in the siting and planning of individual buildings where allowance has to be made for future expansion. Following a resolution of the Conference of Ministers of Education, a central institute or archive was established in Stuttgart in 1962 to collect and evaluate planning material and to advise government administrative departments. Since then the scope of this institute has been widened to include research into and the systematic analysis of factors relevant to tertiary sector building. The institute arranges meetings and publishes information so as to facilitate the exchange of experiences and of results achieved.

Working methods in university administration have also been adapted to present-day requirements. The ministries of education of the Länder have appointed planning teams who, in close collaboration with the statistical offices and other institutions, elaborate comprehensive development and extension plans for the tertiary sector, some of which have already been submitted.

Planning in this sphere depends heavily on the collection of data and on quantitative calculations. The surveys carried out in the past need to be considerably enlarged and planning methods improved so as to make allowance for complex situations. With this aim in view, the Federal Government, the Länder, the universities and similar institutions established an information system (HIS) on the initiative of, and financed by funds from, the Volkswagenwerk Foundation. The task of HIS is to collect appropriate information, process it, and pass it on the authorities and other bodies concerned with decision-making in the tertiary sector. In the meantime, HIS, with headquarters in Hanover, has established a network of information centres at various universities. For the most part they carry out surveys of students' wishes, the progress of studies, and the demand for graduates in different fields.

9. Further Education

9.1 Tasks of Further Education

In the course of the past decade, the recognition that school education and vocational training cannot provide comprehensive and inclusive knowledge has increasingly gained ground in the Federal Republic too. The general view is that people should not terminate their efforts to be educated at a particular moment, but have to adapt themselves to life-long, uninterrupted learning. The rapidity of social, economic, and technological developments demand of the individual constant adaption to the continually changing conditions of the vocational and working world. Further education is intended to advance the development of an independent capacity for critical judgement, so as to put the individual in a position to understand himself and his environment better and to base his actions on this understanding. Further education in the comprehensive sense has the task of providing an accompaniment to life and work. It must not only serve individual claims to personal development and fulfilment by way of leisure. It must also serve the claims of society as for instance in education in civics or in continuation vocational training. Constant further education for all members of a society increasingly becomes a decisive precondition for social security, economic growth, and communal progress. It thus becomes clear that the comprehensive sphere of further education cannot be treated as a peripheral aspect of education and training, but will be seen as being closely linked. The concept of "further education" ("Weiterbildung") utilised here is of recent origin. It is closely based on the English and French ideas of "lifelong learning" and "education permanente". Scholarly and political discussions previously employed long-established terms such as "adult education", "continuation vocational training", and "retraining". Further education incorporates all these aspects. There is, however, no overall agreement about which of the individual educational institutions are to be included in this sphere. Abendrealschulen, Abendgymnasium, or Fachschulen, for example, also serve the further education of the citizen. For clarity's sake, institutions within the school and university system (e.g. refresher courses) are not dealt with in this chapter. For that, see preceeding chapters of the Report.

In what follows, the starting-point is that in detail further education comprehends these two functions:

1. Continuation vocational training

   Continuation vocational training comprehends further training and retraining.

   Further training is understood in the Federal Republic of Germany to involve measures that are organised (after the completion of vocational training or appropriate vocational experience) with the aim of maintaining, complementing, extending, or improving vocational knowledge and skills. Further training is intended to make it possible for the employed person to adapt his vocational knowledge and skills to technical and economic developments (adaptation training) or to advance in his job (advancement training).

Retraining comprehends measures aimed at equipping people for another vocational activity. Vocational retraining is intended to make it possible for the employee to practice a new, more qualified activity, which corresponds to his bodily and intellectual capacity. At the same time, it is intended to help improve vocational mobility and thus to make easier adaption to developments.

2. General Further Education

There exist, beyond the spheres already mentioned, an almost unlimited number of educational facilities, which are often summarised as "Adult Education". It is universally agreed that every kind of vocational or political further education must be accompanied by measures with a general educational content. In practice, moreover, these various spheres cannot for the most part, be divided. Fundamental courses of study, such as German, Mathematics, the Natural Sciences, Sociology, Psychology, and Languages, are of major importance here. There are also the far-ranging spheres of education of parents, of courses in social affairs, religion, history, and geography, and of further training in the arts and sciences. Numerous activities concerned with making preparations for an organising leisure also come into the sphere dealt with here. Everything that is offered partly serves the needs of adaption and advancement, and partly too the need for personal enrichment or entertainment of interest and significance.

9.2 Role of the State - multiplicity of sponsors

The Basic Law in the Federal Republic of Germany and the constitutions of the Länder do not contain any mandate for the setting up and comprehensive organisation of the systems of further education. Instead a large number of non-state sponsors - from the local authorities(1) by way of the Churches, self-administering organisations within the economy, and various associations, up to individual business firms - have taken on the task of offering members of society further education in the most widely varying forms and according to widely differing aims. Activities are partly concentrated on more vocationally-directed further training, and, in case of other sponsors, more on the provision of courses in the general educational sphere. The state gives the sponsors financial support, and also makes a concrete contribution in individual spheres of particular relevance such as continuation training for teachers, public administrators and soldiers. It also provides support for the well developed system of public libraries in the Federal Republic as an essential precondition for an efficient system of further education.

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(1) In the Federal Republic of Germany, municipalities are not included in the state in the narrow sense (Federation and Länder), but constitute a separate sector of municipal self-government.

9.2.1 Länder

Co-ordination

An essential contribution by the Länder in the sphere of further education is provided by the co-ordination of activities which they have practiced for many years. This finally resulted in modern laws on adult education. Since 1959, the Länder have subjected to intense examination the situation in the spheres of adult education and of the library system, and also the possibilities of increased support from the state. The seoond recommendation about adult education of the Standing Conference of Ministers of Education and Cultural Affairs, dated 4th March, 1971, is a continuation of the recommendation of 1964 and takes into consideration in particular the outcome of the German Education Council's Structural Plan. As did the German Education Council, the Standing Conference of Ministers of Education and Cultural Affairs recognises the necessity to establish a sector called "Weiterbildung" (further education) in addition to the already existing levels of the education system. More than the German Education Council the Standing Conference, however, emphasises besides the vocational orientation of further education the importance of adult education in the field of the organisation of leisure time. The recommendation is based on the assumption, that much more full-time teachers with special training for adult education should work in this field and it proposes a career within the Civil Service. For the development of additional studies (Zusatz- oder Kontaktstudium) a state recognised system of certificates is recommended(1).

Laws on Adult Education

A "Law on the provision of subsidies to Volkshochschulen and corresponding institutions of popular education" has been in force in one Land (North Rhine-Westphalia) since 1953. In

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1) Text of the recommendation, see Addendum 37

1970, Adult Education Laws were passed in Lower Saxony and the Saarland, and the Volkshochschule Law in Hesse. A draft law is being discussed in Schleswig-Holstein. The laws in Lower Saxony and the Saarland regulate the conditions under which non-state institutions of adult education can receive financial support from the Land. They respect the nature of the institutions concerned, and guarantee the right to independent organisation of the curriculum and free choice of teachers. The laws in Lower Saxony and the Saarland also lay down the establishment of special Länder committees to advise the Ministers of Education on questions of adult education. The law in Hesse only contains regulations on the Volkshochschulen. Regulations on the provision of financial backing for other organisations will be covered in a special law.

Continuation Training for Teachers

Continuation training for teachers is the most important of the institutions of further education established by the Länder themselves. This training is of special significance with regard to the overall state of the entire educational system. The Ministries of Education in most federal Länder make use of special institutes (Baden-Württemberg, Bremen, Hamburg, Hesse, North Rhine-Westphalia, Saarland, and Schleswig-Holstein) for carrying out this task. These institutes - and also the intermediate level of school authorities (Regierungspräsidien) - plan and organise meetings and courses for the further training of teachers in all kinds of schools.

In North Rhine-Westphalia, for example, 178 meetings and courses were organised in 1968, each lasting for several days. Between 1963 and 1967, a total of 29,481 teachers took part in 880 activities organised by the Land's institute, which works out at an average of 5,896 teachers per year. That is around 7 per cent of the total of some 71,000 teachers. Included in these activities are those whereby passing a terminal examination makes possible acquisition of new or additional teaching qualifications.

Radio and Television(1)

Radio and television are excellently suited (because they are not limited to a single place) for the organisation of further education for people living far from towns. Examples

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1) In the Federal Republic of Germany, radio and television are not organised in a Federal uniform system, but are administered by legally independent public broadcasting institutions in the Länder, subject to Länder laws. The state does not exercise direct control over radio (including television).

of this are provided by the radio courses run by some Länder, the television courses in data-processing and electro-technology, and the television courses jointly established by Bavaria and the Bavarian Radio. This is primarily directed towards people who also have a job. They are offered the opportunity of completing - in eight three-month terms - the Realschule course and of acquiring the qualification necessary for the Fachschule. The Saarland, South German, and South-West German radio stations have meanwhile also joined this Telekolleg. In addition, there are regular radio and television courses for the most important modern languages.

	1969	1970(estimated)
Budget expenditure by all 11 Länder on their own institutions of Further Education and as subsidies for non-state institutions	40 m. DM	53 m. DM(1)

9.2.2 Local authorities

Volkshochschulen

The Volkshochschulen are an established component in what is offered educationally by district, city, and local authorities. Districts and municipalities fulfil in the Volkshochschulen their public mandate in the sphere of further education - in a similar way to their organisation of the public school system. It must nevertheless be noted that, to date, only around 50 per cent of the Volkshochschulen are directly organised by the district or local authority concerned, and the rest are organised - with considerable financial support from the municipalities - as associations or foundations. The number of municipal institutions is slowly growing.

The Volkshochschule provides the institutional framework for a comprehensive range of educational facilities. It is not tied to the views and aims of certain groups. The Volkshochschulen offer courses, lectures, etc. in the sphere of both general education and also, to an ever increasing extent, of vocationally-oriented education. The range extends from Volkshochschulen in big cities with a large number of courses to the small country educational centre that provides only a few courses and a number of cultural events. The 1969 statistics show that there were then 538 municipal, and a total of 1,194. Volkshochschulen with various sponsors in the federal area including Berlin. Over 4 million people attended individual events, and over 2 million group activities and courses.

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1) On the basis of data gathered by the Baden-Württemberg Ministry of Education.

31.12. Land	Volkshochschulen*)						Group activities courses		Individual events	
	sponsored by			total	with					
	municipality	registered society	others		full-time director	part-time director	total	attendance	total	attendance
	number							'000	no.	'000
1967	561	445	186	1192	195	995	39497	1896.0	62829	4179.2
1968	621	454	167	1242	205	1037	94182	1963.7	67250	4159.4
1969	588	482	144	1194	209	985	100649	2056.8	61586	4397.9
of which (1969)										
Schleswig-Holstein	57	40	21	168	5	163	5768	86.3	2058	148.2
Hamburg	-	-	1	1	1	-	2126	53.5	10	0.8
Lower Saxony	58	63	4	125	19	106	11872	212.2	3167	204.3
Bremen	2	-	-	2	2	-	1701	36.8	274	16.7
North Rhine-Westph.	210	34	5	249	64	185	27925	554.3	10789	1177.2
Hesse	30	52	9	91	40	61	10175	222.1	12106	600.0
Rhinel. Palatinate	36	23	34	93	14	87	7834	174.0	5328	443.1
Baden-Württemberg	102	63	14	184	33	161	9653	214.8	12342	789.3
Bavaria	72	188	4	244	21	223	12632	258.2	13328	627.9
Saarland	9	9	2	20	1	19	1906	36.8	1087	97.4
Berlin (West)	12	-	-	13	12	-	8867	207.8	1126	90.0

*) without external branches

(Source: German Adult Education Association, Bonn)

Music Schools

The growing number of music schools established in the municipalities (149 in 1968 - and 290 at the end of 1970) endeavour - by way of individual or group instruction - to put music across to a broad circle of the interested, and also to help young people who are particularly musically talented to take up a musical career later.

The Conference of Ministers of Education recommended in its resolution dated 19th-20th January, 1967 that an extensive network of music schools should be set up, both well equipped and employing, as far as possible, full-time teachers.

9.2.3 Federal Level

The federal authorities have only set up their own institutions of further education within narrowly restricted limits, and largely limited themselves to financial support for certain sponsors and to general legal regulations in the sphere of Further Training.

Laws

The federal authorities created the basis for comprehensive financial backing in the sphere of further training and retraining with the Work Assistance Law (Arbeitsförderungsgesetz), which came into force in 1969. The aim of the assistance measures (which replaced the previous programme for individual and institutional assistance of further training) is, in correspondence with the law's basic concept, to attain and maintain a high level of employment, constantly to improve the structure of employment, and thus to promote growth of the economy. Details about the possibilities of assistance and advancement are presented in the chapter on "Promotion of individual education".

The Vocational Training Law (Berufsbildungsgesetz), which also came into force in 1969, contains guidelines for the regulation of further training and retraining. These guidelines permit the relevant authorities (usually chambers of industry or trade, or guild chambers) to carry out examinations providing a demonstration of the knowledge, skills, and abilities acquired by way of further training. The examinations must correspond to the special requirements of vocational adult education. The Federal Minister of Labour and Social Structure can lay down - by way of a legal decree, and with the consent of the Minister whose sphere of activities is involved - the content, the objective, the examination regulations, the conditions of acceptance for the examination, and the specification of the terminal result.

In the sphere of retraining, the law lays down that the measures concerned with content, nature, objective, and duration must correspond to the special requirements of vocational adult education. The same applies to examinations that are organised as demonstration of the knowledge and abilities gained through retraining. The relevant authority (usually one of the chambers mentioned above) supervises the way the retraining is carried out, and checks the personal and trade qualifications of the trainer and the suitability of the place of training. The Federal Minister of Labour and Social Structure can lay down - by way of a legal decree, and with the consent of the Minister whose sphere of activities is involved - the content, the method, the objective, and the duration of retraining.

Two more important organs were established on the basis of the Vocational Training Law: the Federal Committee for Vocational Training, and the Federal Institute for Research into Vocational Training. These are also of special importance for the sphere of further training and retraining.

The Federal Committee for Vocational Training, whose membership contains equal numbers of representatives of employees, employers, and the state, is intended to advise the Federal Government in important questions of vocational training, and thus also contribute to the scholarly establishment, co-ordination, and improvement of further training.

The Federal Institute for Research into Vocational Training is intended to determine (with the assistance of interdisciplinary research methods) among other things the content and objectives of further training and retraining.

The introduction of legal provision for time off for education and training constitutes an important inducement for further education The precondition for equality of educational opportunity is that employees are granted time to take part in training courses, etc. The Federal Government will therefore prepare plans permitting step-by-step introduction of time off for education and training.

Specific Institutions for Further Education

The Federal Army has established - as a result of the Maintenance of Soldiers Law (Soldatenversorgungsgesetz) - a Vocational Advancement Service for long-service soldiers. The army thus makes a contribution, widely recognised by industry and commerce, to the further education of the citizens entrusted to it. In the 10 years of this Service's existence, 40,000 soldiers have completed recognised trade examinations during their period of service, and 85,000 soldiers have undergone vocational training at the army's expense after their period of service was over. Similar institutions exist for the Frontier Protection Force.

Federal activities also incorporate the Federal Centre for Political Education and the Federal Academcy of Public Administration as institutions of further education and training for federal employees. Both come under the supervision of the Federal Minister of the Interior. The Federal Railways and the Federal Postal Services, both service enterprises, and the Federal financial authorities also undertake extensive efforts within their spheres.

Promotion of central Measures and Institutions

The Federal Government provides backing under widely varying aspects for institutions of a supra-regional nature and corresponding facilities and events, which extend beyond the sphere of a single Land and are of fundamental significance. There is an emphasis on, for example, helping young people by way of money from the Federal Youth Plan, on education for parents and families, on providing assistance for adult education in country areas, and on financing central offices within the library system and the Volkshochschulen.

9.2.4 Other Sponsors of Further Education and other Institutions

German Adult Education Association (Deutscher Volkshochschulverband)

The German Adult Education Association, established in 1953, co-ordinates the work of the Länder associations, represents the Volkshoghschulen at federal level in dealings with state institutions, and cultivates links with the big organisations involved in adult education, such as the Churches or the trade unions. The German Adult Education Association set up a Pedagogic Centre for the advancement of scholarly research in the sphere of adult education and as a general information centre. Its work also increasingly extends to the training of full-time employees for the Volkshochschule, the publication of work materials, and information on the work of the Volkshochschulen. The preparation of courses leading to a certificate - up to now in English, French and Mathematics - and the co-ordination of the programme of certificate courses developed by the Volkshochschulen have been and continue to be amongst the most urgent tasks.

Churches, Parties, Trade Unions, and other Organisations

The Churches, political parties, trade unions, rural sponsors of education, and the independent educational centres have long been recognised for their contribution to the sphere of further education. They are concerned with enriching, from their particular point of view, the diversity of what is offered in the way of facilities and events of a vocational or general educational nature. The DGB and DAG's educational activities, for example, involve a broad programme ranging from stenography courses to instruction in mechanical data-processing.

The German Trade Union Federation has established facilities for further education in nearly 30 towns, and these facilities are open to both members and non-members. The Academies set up by the Churches are important places of encounter for discussion of topical problems.

Activities at the firm and supra-firm level

It is primarily large firms in all branches of private enterprise that have, to some extent, set up their own further training organisations, so as to make their workers and staff familiar with the constantly changing technical and commercial demands of their business. Suitable employees are brought together for courses that often last for several weeks, and prepared for new tasks often demanding extended qualifications. These courses are the unique responsibility of the firm's management, and are very much adapted to the firm's special needs. Transmission of knowledge and skills that are closely related to the job concerned is, naturally, very much stressed in further training within a firm. There is less emphasis on those functions of further education involving civic responsibilities and the organisation of leisure.

At the supra-firm level, the vocational and trade associations in all branches of the economy organise an almost unlimited number of courses, seminars, and lectures for technicians, master craftsmen-to-be, trainers, and managerial staff of all levels. The activities of self-administering organisations within the economy, and of the chambers of industry, trade and agriculture, should also be mentioned in this connection.

Correspondence Courses

What are for the most part commercial concerns offer people interested in further education courses in almost all vocational spheres, courses in preparation for what are known as external examinations (for candidates who have not completed the usual school course), making possible completion of school qualifications. There are also all kinds of general and artistic courses. The Länder have established a Centre for Correspondence Courses so as to protect people from abuses. This Centre is intended to test the courses offered on the market, and grade them.

The newly-established Federal Institute for Research into Vocational Training is responsible for this task in the case of vocational forms of correspondence courses.

9.3 Professional Image of the Teacher in Further Education

No unified professional image of the teacher working in further education exists. This is a direct consequence of the diversity of sponsors involved in further education and the diversity of activities offered.. Up till now, a large number of the teachers (especially in the Volkshochschulen) were not full-time, but the present tendency is towards relying increasingly on full-time teachers, above all teachers who have been trained for the special task of further education. In order to satisfy the greater demand for qualified teachers, it will be increasingly necessary to assign some aspects of a teacher's tasks (such as the transmission of factual knowledge) to technical media, so that the teacher is thus freed for his real pedagogic function in teaching adapted to adults.

9.4 Qualifications

At present, the individual sponsors of further education issue their own certificates of achievement, but these are not coupled with fixed rights to admission to studies as is the case with state-recognised qualifications in the school and university system. The Volkshochschulen have begun to create in their sphere a unified system of certificates - principally for foreign languages. A comprehensive system of recognised qualifications for the entire sphere of further education has still to be worked out.

9.5 Co-operation between the sponsors

The multiplicity of private and public sponsors of further education guarantees widespread availability of teaching activities in all subjects and at all levels, but the fact cannot be overlooked that completely autonomous planning on the part of individual sponsors in thinly populated areas can lead to a certain degree of fortuitousness in what is offered, so that it can happen that someone does not come across an urgently needed course in his neighbourhood.

The Volkshochschulen have united (see above) as associations at the Land level and as the German Adult Education Association at the federal level. Similar unions exist among the other sponsors involved. In addition, a relatively loose source of reciprocal information and synchronisation exists for everyone concerned with adult education in what is known as the Heppenheim Discussion Circle. The Standing Conference of the Länder Ministers of Education has exerted a co-ordination function by way of work in its committee on art and adult education, and, most of all, through its recommendation in 1964 and 1971.

Continuous and closer co-operation between the sponsors of further education is especially demanded in what is called the "Picht Assessment"(1) produced for Baden-Württemberg, and also in the German Education Council's structural plan and in the Federal Government's report. Both proposals take as their starting-point that the overall sphere of further education is a public responsibility. The public authorities should not, however, take the place of the sponsors to date of further education, but should provide for co-ordination and co-operation, and grant subsidies according to the sponsor's efficiency and the ability of participants to make a financial contribution. The proposals provide for the comprehensive concept of further education being worked out by a joint committee representing everyone involved, and also being regularly adjusted to changing circumstances. The principles involved in recognition of certificates and qualifications are also to be laid down in accordance with these proposals. This will be done in co-operation with administrators concerned with culture.

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1) Education in a new light, overall plan for a co-operative system of adult education /Bildung in neuer Sicht, Gesamtplan für ein kooperatives System der Erwachsenenbildung (Picht-Gutachten)7, appeared 1968 in the series of papers published by the Baden-Württenberg Ministry of Education.

10. Financial Support for Education

a) Free schooling and study materials

The precondition for attending educational institutions is that the living costs of the pupil or student are provided by a third party. That is true both of those involved in full-time attendance at schools and of apprentices in the dual system, who receive from their employers an educational subsidy and not payment established by wage agreement. If the living costs cannot be covered by the trainee himself or by his parents or marital partner, society must - in the interest of equality of chances - take over paying for the training. Free Education up to the end of Secondary Level II has therefore been provided in all Länder since the mid-fifties. The municipal school sponsors receive total or partial compensation from the Länder for the loss of school fees involved. This is also partly taken into account in the division of school costs between the state and the local authorities. Private schools, which renounce school fees for social reasons, also receive compensation from the state in some Länder.

Free study materials comprise in general school books, and, to some extent, equipment extending down to writing and drawing materials. Differences between the Länder involve the way such provision is made and the people entitled to receive it. In some Länder, school books and more valuable study materials are only loaned to pupils. In others, these study materials become the pupil's property. In some Länder, free study materials are only available for pupils in financial need. Such pupils can also receive textbooks without charge in the three Länder which do not normally make study materials freely available. In general, the availability of free study materials has been considerably extended in the Federal Republic in recent years.

Educational and training subsidies are also granted - alongside free schooling and study material - so as to provide greater equality of social chances in the educational sphere.

Additional social support for schoolchildren is available in most Länder to the extent that school buses are provided and/or no charge is made for public transport if children live far away from their school. In addition, reductions are available everywhere for pupils and students making use of public transport.

Study fees were recently abolished (except for a social welfare contribution) for German students, and for foreign students under certain conditions, at universities in all Länder. Some Länder had long renounced study fees for students resident within the Länder area. The cost of study materials - to the extent that they are not materials belonging to the university and are made available free of charge - is partly borne by public funds within the sphere of financial support for studies, so that the study materials students need (books etc.) are taken into account in the assessment of scholarships and loans.

Free schooling and study materials have largely lost the character of socially-motivated financial support in the Länder of the Federal Republic. They now represent cost factors in school maintenance that are taken as a matter of course, since they are established by law and are largely available to every pupil without any special application or means test.

b) Financial Support for Training

Pupil's parents usually provide living costs. Various systems of provision for financial support exist in the Länder for the period after the primary level and, to an even greater extent, after completion of compulsory full-time schooling. These are intended to make it possible for various groups of pupils to attend secondary schools even if their parents cannot meet the costs involved.

The "First Law on Individual Support for Training" (Ausbildungsförderungsgesetz dated 19th September, 1969) came into force on 1st July, 1970. This law provides for the Federation granting financial support for attendance at secondary schools from class 11 onwards. The Federal Government believes that this provides an essential contribution to making it possible for young people in the Federal Republic of Germany to have a freely-chosen training corresponding to their inclination, aptitude, and achievement, and to tap reserves of talent from broad sectors of the population.

This "First Law on Assistance for Training" applies, to begin with, to:

1. Pupils at general secondary schools from class 11 and pupils at Fachoberschulen
2. Pupils at Berufsaufbauschulen, Abendrealschulen, Abendgynasium, and Kollegs
3. Pupils at Berufsfachschulen, to the extent that attendance is dependent on the Realschule qualification or a comparable qualification
4. Pupils at Fachschulen
5. Pupils who have to gain practical experience as part of attending one of the previously mentioned institutions.

Inclusion of the 10th school year, and refunding of the accommodation costs for non-residential pupils in classes 5 - 9, is also planned.

The amount of assistance to be granted in individual cases depends on the income and financial resources of the person to be trained and of the people responsible for his upkeep. A pupil receives unrestricted assistance if his parents' net monthly income does not exceed DM 750. Higher incomes and greater resources are taken into account in calculation of the assistance. From 1st January, 1971 the top levels of monthly assistance amount to:

1.	for pupils at general secondary schools from class 11, Fachoberschulen, and Berufsfachschulen	DM 150
2.	for pupils at Berufsaufbauschulen and Abendrealschulen	DM 300
3.	for pupils at Fachschulen, Abendgymnasien, and Kollegs	DM 320

If the pupil does not live with his family, these sums can be increased up to DM 380 (depending on the training institute concerned).

A resolution by the Federal Government, dated 4th June, 1970, lays down that students at colleges, academies, colleges of engineering, and advanced Fachschulen should be included within the sphere of the law regulating training assistance with effect from 1st October, 1971. In this sphere, students at universities are at present still jointly assisted (according to the "Honnefer Modell") by the Länder and Federation, and students at academies, colleges of engineering, and upper Fachschulen by the Länder alone (according to the "Rhöndorfer Modell"). From 1st January, 1971, recipients of the Honnef and Rhöndorf forms of assistance receive up to DM 400 monthly. The level of assistance depends on the income and financial resources of both the student and his parents. A student receives the DM 400 full assistance if his parents' net monthly income does not exceed DM 800. 50% of incomes that exceed DM 800 are set off against this upper level of assistance.

Financial and structural improvements are intended in the planned new regulation. A reasonable degree of self-participation on the part of students and their families in covering the costs of studies is - as with the Honnef and Rhöndorf forms of assistance - also foreseen in this "Federal Law providing for Financial Support for Training" (Bundesausbildungsförderungsgesetz). This is intended to strengthen personal responsibility within basically free choice of a course of study and of a university. Another reason is that public funds cannot completely cover the high costs involved.

Apart from these relatively minor (in view of the existing Honnef and Rhöndorf forms of assistance) financial improvements, the following structural improvements are at present foreseen:

- Extended assistance even for trainees preparing for university studies
- Assistance for participation in correspondence courses
- A legal right to assistance in the case of part or full-time training in a European country
- Assistance for foreigners
- Renunciation of above-average achievements as the precondition for assistance
- Reduction of the compulsory loan
- Simplified determination and calculation of incomes
- Fixed free deductions from the trainee's income for wives and children
- Deductions for children gradated according to their age
- Payment of assistance in advance in disputed cases
- Synchronisation of the right to assistance with civil law regulations on upkeep
- The taking of capital into account only in cases where capital tax payments are compulsory.

The regulation about assistance for foreigners will, however, probably only be applied at a later date.

Special possibilities of financial assistance for highly talented pupils and students exist in individual Länder. The federal authorities made available over 12 million DM in 1970 to supra-regional schemes for providing assistance to the highly talented, and to the German Academic Exchange Service for studies abroad. Over 22 million DM from federal resources are earmarked for the same purpose in 1972.

The basis for assistance for vocational training within firms is constituted by the Training Assistance Law (Arbeitsförderungsgesetz) that came into force on 1st July, 1969.

There exists, under this law, a legal right (if certain preconditions are fulfilled) to financial assistance in training (at firm or higher level) in a job where the need for training is recognised, and in participation in preparatory schemes. The precondition for assistance is that the job aimed at corresponds to the aptitude and ability of the trainee. Assistance for vocational training consists of financial support for living costs and for the training itself. The requirements of training include, for example, course fees, study materials, working clothes, etc.

c) Other Assistance Measures

Under the Federal Social Aid Law (Bundessozialhilfegesetz) further possibilities exist for assistance in general and vocational training for all people who do not possess an adequate income or financial resources and cannot claim assistance under other regulations. Some 20 million DM are devoted to this purpose annually.

For certain categories of people (the war-wounded, victims of persecution, etc.), there exist possibilities of assistance under the Law for Compensation of Encumbrances (Lastenausgleichsgesetz) or else under the laws providing for care of war victims. These spheres of assistance, which were considerable some years ago, are losing in importance, however, with the passing of time since the events that made them necessary.

The Federal Government is at present preparing a draft law for the assistance of the new generation of scholars, which is within the sphere of federal competence under Article 74 No. 13 of the Basic Law. This draft law is intended to make possible adequate future provision for scholarly tasks, both inside and outside the university, during a process of transformation of structure and extent.

Assistance is to take the form of the granting of scholarships to applicants with special talent for scholarly work. The general precondition will be conclusion of a course of university studies, making possible the start of work on a doctorate. The draft law lays down that assistance can be accorded to a doctorial candidate whose work promises to make an important contribution to research, or to a participant in further studies, organised by the university, which deepen or complement previous studies especially by way of extended participation in research. Decisions about awarding these scholarships will be taken by professorial committees at the universities. The scholarship is to be worth DM 900 net, and will, on the whole, be granted to people without regard to their financial circumstances.

d) Further Training and Retraining

Previously existing possibilities of financial assistance for further training and retraining have also been extended by way of the Work Assistance Law (Arbeitsförderungsgesetz). This provides for assistance for participation in measures aimed at establishing, maintaining, extending, or adapting to technical developments (further training) vocational knowledge, and skill. The precondition for such assistance is, among other things, completed vocational training or relevant experience.

In addition, people looking for a job receive assistance for participating in measures that aim at making possible transfer to another and suitable job (retraining). The usual precondition is that the applicant has been at work for at least three years.

Assistance for further training and retraining is granted when the training measures in which the applicant takes part fulfil certain minimal demands with regard to length, organisation of the curriculum, etc. and when the applicant is suitable. In addition, the assistance must seem expedient in terms of the state and development of the labour market and of the applicant's vocational wishes.

A cost of living allowance is granted for participants in measures involving full-time lessons (and in certain cases also for people receiving part-time teaching). This is composed of the main sum and family bonuses, and can amount to up to 95 per cent of the net income previously earned. All the costs unavoidably involved in participation in the further training or retraining courses - especially course fees, costs of study materials, working clothing, etc. - are also covered or refunded.

If the applicant does not meet the requirements demanded in assistance, interest-free loans can be granted.

The Federal Labour Office can, in addition, grant employers subsidies for employees who can only attain full productivity at their place of work after a familiarisation period (familiarisation subsidy). This familiarisation subsidy, which is not to be granted for longer than a year, can amount, during the entire familiarisation period, to up to 60 per cent of the agreed wage, or - if a wage agreement does not exist - of the usual local wage for the job concerned.

11. Sponsorship and Administration in the Sphere of Education

The German educational system has developed in close association with the state over the past two hundred years. The educational system in the Federal Republic is also determined by this. Only in the sphere of vocational training do private initiatives and private sponsors (especially within craft activities, and private business and trade) play a comparatively large part in this sphere compared with the state. In the preschool sphere too, private sponsors - religious organisations, welfare associations - predominate among kindergardens. The great majority of schools, on the other hand, are publicly sponsored, and so too are all universities.

Sponsorship of Schools

The state in Germany has viewed the education in school of young people as being its affair ever since the end of the 18th century, and particularly in the 19th century. In the sphere of the Volksschulen (today Grundschulen and Hauptschulen) - in other words, in the sphere of compulsory education - sponsorship of schools was, it is true, consigned to towns and local authorities, but the state considered this municipal sponsorship as being basically a state mandate even though, on the other hand, town and local authority initiatives in the development of the school system were also of great significance. Private sponsors of schools play only a minor part in the sphere of compulsory education today too.

The municipalities and municipal associations (District and local authority associations) are also the main sponsors of Realschulen and Gymnasium. In some Länder, there are a large number of state Gymnasien. On the other hand, there are - especially in the Länder in the south and west of the Federal Republic - a large number of private Gymnasium, and, to a limited extent, also private Realschulen. These private schools are mainly sponsored by the Churches or by religious associations (for example, religious orders), and also by other ideologically and educationally interested groups. The comprehensive schools now being developed are almost exclusievely publically sponsored. Public sponsorship also predominates among Sonderschulen, but there are also a considerable number of private institutions.

The general Berufsschule (part-time compulsory school) is municipally sponsored. In the sphere of Berufsfachschulen, Fachschulen, and upper Fachschulen, there are a restricted number of private schools alongside the state and municipal schools. In the sphere of vocational training though, the private economy (as has already been elucidated elsewhere) plays a major part within the dual system in the non-school sector.

The number of pupils in private Berufsschulen is around one per cent.

The Financing of Schools

School sponsorship no longer signifies today (except in the case of the state schools) that the sponsor bears the entire costs of the school. It is more often the case that the state takes over part of the costs. In the case of schools under municipal sponsorship, there are various mixed forms of financing involving the state and municipal school sponsors. In general, the state covers the costs of personnel (the costs of teachers, who are also civil servants at the Land level), while the local authorities (district and school associations) meet the major cost element involved in material costs. In some Länder though, the municipalities also contribute to the costs of personnel. The state, on the other hand, also makes an increasing contribution to the material costs. In the case of state-recognised general private schools, the state takes on part of the personnel costs (in some cases up to 100 per cent) and of the material costs by way of refunding.

The Financing of Vocational Training in Firms

Vocational training in firms is sponsored (in the narrower sense) by enterprises within industry, trade, craft occupations, by firms engaged in agriculture, forestry, catering, etc., by public administrations, doctors and dentists, lawyers, accountants, etc.

Sponsorship (in the broader sense) lies with the institutes designated in the Vocational Training Law as being responsible for the organisation and supervision of vocational training. These are:

Chambers of Industry and Trade

Chambers of Agriculture

and the organisations grouping lawyers, experts in Patent Law, industrial inspectors, accountants, doctors, dentists, and chemists.

The vocational training committees, established at these institutes and manned by equal numbers of representatives of employees, employers, and teachers at schools for vocational training, have to decide on the legal regulations governing the organisation of vocational training.

University Sponsorship

The universities and equivalent institutions (technical colleges, mining academies, etc) were almost all established by the state in Germany (in earlier times by the Princes). There are at present no private universities in the Federal Republic. All institutions of university level except for a few church colleges - are sponsored by the state, which means by the Land concerned in accordance with the federal constitution. That is true too of the colleges of education, which have developed out of the state teacher seminars, and which have today also acquired university status in almost all Länder. That signifies at the same time that the entire sphere of teacher training is borne by the state: the training of teachers for Gymnasium in any case since this traditionally takes place at university; and also the training of teachers for Realschulen, Hauptschulen, Grundschulen, and Sonderschulen, whether this be at the university or at colleges of education. In the sphere of the Fachhochschulen, which are at present being developed from the upper Fachschulen (cf. II, chapter 8), private school sponsors exist in individual cases, and there are also municipally-sponsored Fachhochulen. The possibility of setting up non-state Fachhochschulen(1) does not, however, exist in all Länder.

The Financing and Administration of Universities

The financing of universities is mainly carried out by the state. Third parties are also involved in such forms as research commissions and endowments. Further details of this and of university administration are to be found in section 8.

School Administration

School Administration in the narrower sense (basically the school's external involvements) is usually dealt with by the sponsor concerned: in state schools by the public authorities; in municipal schools by the responsible local committees, associations, and authorities; and in private schools by their sponsors (school associations, etc.).

Since the teachers at municipal schools usually have civil servant status too, the state is also responsible for the administration of personnel in these schools. But the municipalities or municipal associations also have the right to play a part in the choice and engagement of teachers. In three Länder, there also still exists the form of the purely municipal school, where the municipalities bear personnel costs too and engage teachers independently.

The state school administration, headed by the Ministry of Education and Cultural Affairs (or the Senate School Administrative Authority in cities with Land status), also exerts an influence on schools' internal affairs by way of the school inspectorate (which is concerned with what is taught as well as with the legal regulations) and by way of the implementation of

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1) For sponsorship in the sphere of further education, see chapter 9.2

laws affecting schools. The state school administration provides for central planning and direction, for order, and for assistance to the school system (e.g. determining dates of school holidays, laying down the nomenclature of schools and classes, establishing curricula and timetables, approving the establishment of schools,etc). The school direction has independent authority in certain issues of school existence and organisation of the teaching, but is otherwise bound by instructions.

Teachers are also involved in the direction of (public) schools (cf. section 6). So too are parents and pupils (co-responsibility) in various ways dependent on the Land concerned. They also provide advice to the school administration in special committees at the Land level.

PART THREE

Future Development of the System

1. Preliminary Remarks

The development of the education system during the past decade has been characterised by two factors:

1. quantitative expansion;
2. qualitative and structural changes to improve education opportunities for the individual and the greater efficiency of the system as a whole.

There is a close but complicated connection between the two factors. The individual reform measures are also aimed at making possible a quantitative expansion and at absorbing this. At the same time, this expansion leads to overcrowding, a shortage of teachers and a financial strain, which make the implementation of reforms more difficult.

An appreciation of the necessity - both economically and socially - of increasing the proportion of the population with high educational qualifications came about primarily after the Washington Conference of the O.E.C.D. in 1961. Within the existing system, changes had to be made above all in the Gymnasium. This development was stimulated by individual measures, which are explained in greater detail in Part II: Easing movement from the Grundschule to the Gymnasium and the Realschule; improvements in the chance of changing after the fifth school year (extension courses, promotion courses and observation grades). The expansion of alternative access possibilities to the university - via the so-called "second path" of education - carried little weight quantitively, but is of basic importance in educational policy.

Another often too little appreciated result of the growing "education consciousness" is the increasing demand for higher qualifications within the vocational education system. This demand has led to a percentually very strong expansion in full-time vocational schools. Here, political and public interest - the latter at the height of the discussion in 1968 - has concentrated primarily on institutions which were qualitatively related to the university: the Höhere Fachschulen, in particular for engineering (Ingenieurakademien). In this instance, a comprehensive Länder expansion programme had already been operative since the mid-1950s. After a lively educational policy debate, an important structural change was approved: Höhere Fachschulen for engineering, economics and a number of other subjects became "Hochschulen" (Fachhochschulen); the entry qualification was raised accordingly (final qualification at the Fachoberschule), but not - as in the case of other Hochschulen - acquirable at the Gymnasium. If one considers the plan to integrate the various forms of university into a Gesamthochschule (comprehensive university), the importance of this route to university education within the existing system is quantitively significant and clear.

Other reform measures within the system, described in more detail in Part II, are intended to contribute to the general improvement in efficiency of the total system and at the same time contribute to an improvement in the educational and thus the social openings for the individual. They mean at the same time a direct or indirect improvement in the entrance opportunities to a scientific or academic study in the university sector (introduction of a ninth compulsory full-time school year, new curricula for the Grundschule, expansion of the Hauptschule to a secondary level school with foreign-language instruction, differentiation according to the inclination and performance and offer of a voluntary tenth school year, differentiation and concentration in the upper level of the Gymnasium, financial support from the eleventh school year according to terms of the Educational Promotion Law).

With regard to the subject being dealt with here - the future development of the educational system - these measures and their effects are primarily important from two angles, which in turn reveal the integration of quantitative and qualitative problems:

1. There are further developments of the traditional system, whose basic structure will remain (vertical division within the secondary level after the fourth school year; division between the general and vocation-oriented final certificates according to school form, curriculum and qualification; training and qualification of the teachers for the secondary level varying according to the separated forms of school; strong position of the Gymnasium in the acquisition by pupils of high-level qualifications in the secondary level of schooling, the so-called Hochschulreife).

2. There are the changes and developments which point to the need for further reforms. This becomes particularly clear in the connection between the quantitative effects of expansion in the secondary level sector on the university and the plans for structural reforms in the university sector.

The intensity of educational policy discussion, its role in party politics and its importance for the relations between the Federal State and the **Länder** tend to conceal the fact that there has been a considerable degree of unanimity in broad areas over the past years. This has become clear mainly in the discussion about the connected, comprehensive recommendations by the Science Council and the Education Council in 1970.

These recommendations are worked on and presented with the help of Government representatives. They are more comprehensive and also more radical than those of the German Committee of 1959 (See II, 7). They will, as far as can be judged, be more quickly and widely realised than those, because in the decade gone by there is a greater appreciation of the social policy importance of the educational system, and the need for reforms has become clearer. Thus in 1969, when the two big parties - the CDU/CSU and the SPD - formed the grand coalition, changes in the constitution became possible which, together with increased financial responsibility by the Federal State, made possible a skeletal competence for the general principles of university education and also made possible co-operation between the Federal State and the Länder in educational planning also in the other sectors of the educational system. The new mechanism built on this for a comprehensive and co-ordinated planning and reform of the entire educational system will be described later on.

Where the necessity of comprehensive reforms is demonstrated most clearly - in part due to the effects of partial reforms in individual sectors and the successful campaigning on behalf of education in the sixties - i.e. at the university, there is today far-reaching agreement even on the idea embodying wide-ranging alterations in the traditional forms of organisation and structures(1).

In the school sector, the present stage in the discussion can be reduced to its simplest terms by saying that some people seek a continuation of improvements within the basic structures of the existing system, while others consider fundamental changes necessary. If one examines these general remarks against concrete proposals, then the basic difference in many questions is reduced to the varied importance given to individual factors and nuances.

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1) On the reform developments in the university sector, see Part II, No. 8.3

The organisation form of the secondary level I remains at the centre of controversy. Here too there is broad agreement in the principles that every pupil should receive a scientifically or academically oriented basic education, that advancement to the university sector must be open to him from every form of school, that curricula should be modernised accordingly, and that opportunities should be given to each pupil to a great extent through a differentiation according to inclination and attainment. But one side considers that this can only or best be achieved through a horizontally divided school, i.e. an integrated comprehensive school; the others think that one should be ready to try out this school form, but consider it less risky and at the same time possible to achieve these objectives in a continuation of a secondary level school system subdivided vertically into three types.

The strong pressure to attend secondary level education in the general-education schools, the mass of pupils wanting university education, the discussion on extending compulsory education and the integration of the secondary level have contributed to the greater attention in recent time on the vocational education system.

There is a varied, greatly differentiated and thus a not easily understandable system of education streams in schools, firms and supra-firm institutions. The majority of all young people acquire their professional qualification in the dual system of Berufsschule (part-time school) and factory training after concluding compulsory full-time schooling usually in two or three years. A growing number acquire in addition or instead a higher qualification in vocational schools and therefore acquire access to qualified vocations or advanced education courses up to the university sector.

Reform considerations are directed for one thing at making vocational education generally more modern and more efficient, and for another at ending the division between the vocational and general education system, at creating equal transitional and promotional opportunities, and also towards organisationally testing the possibilities of co-operation and integration between the two sectors. These considerations also take into account the structure of the working world itself. The question is to create appropriately differentiated and attractive openings and careers, which e.g. provide an attractive opportunity alternative to the university for secondary level school leavers.

This general appreciation has gained ground in recent years; the interdependence between all sectors of the educational system from Kindergarten to Hochschule, as well as between the education system and the working world make changes and reforms necessary in certain sectors only so that the effects on the total sector have to be included in thinking and planning. Symptomatic of this is the development from the general school system as a subject of the most important recommendation of the German Committee of 1959 to the recommendations of the Education Council of 1970 ("Structural Plan for the Educational System") extending from the Kindergarten to advanced education.

Together with the recommendations of the Science Council for the university sector, these recommendations form a plan for a comprehensive reform of the educational system at all levels. They also provide at the same time a summary of all previous reform discussions. In a long statement issued on 2nd July, 1970, the Länder gave basic approval to the recommendations and regard them as a long-term oriented, scientifically based and dynamic educational policy. The Federal Government has taken them over widely in the description of its educational policy ideas, published in June 1970 as the Government Report on Educational Policy (BT Drs. VI/925). Definitive political and administrative decisions are expected as the result of the work of the Federal-Länder Commission for educational planning in the first half of 1971. Whether it be for reasons of material necessity or of other educational policy views, it may postpone the full implementation of the recommendations in individual points or go over to others. The important aims of the reform and the steps towards its implementation will however be oriented on these recommendations. The following description of the most important details of the reform ideas is based on these recommendations and points to the special problems or varying other views in this connection.

2. The Basic Traits of Reform Plans

The most significant motives of the reform plans can be summed up in two key words:

1. Equality of opportunity, and

2. efficiency.

With the emphasis on these two features, whereby the second can be regarded widely as part of the first, the general conviction about the important social-policy functions of an educational system in a modern, democratically constituted industrial society is revealed, as is a reaction to the important arguments of criticism of the existing educational system. Such criticism accuses the existing system of the fact that despite many beginnings made to reforms,

1. not sufficient has been done, because of the system's content, form of organisation and selection criteria, to remove the existing social levels through the educational system, levels which are reproduced and perpetuated,

2. the educational system in its substance, work forms and assessment criteria is still modelled on the ideas and values of the middle-class culture of the 19th century and as such is not relevant to the justifiable rights of the individual or the requirements of industry and society.

This summarises the situation only roughly of course. Justice is not done either to the system or to its critics. Even the severest critic does not deny that on the basis of the existing system improvements towards equality of opportunity and a modernisation of the curricula have been achieved and that further improvements are possible. On the other hand, the committed advocate of the existing system does not plead for the preservation of the status quo or even for a return to a rigorous selection mechanism after the fourth school year. Both agree that efficiency has to be sought through new curricula and through improved staffing and material provision, and that the levelling off of differences in equality of opportunity conditioned socially or individually have to be attained through a differentiation, a more individual approach, and through flexibility in educational courses. Both are well aware that finance and staff expenditure have to be increased and cannot be increased on an unlimited scale. Both are finally aware that even the best conceivable educational system cannot establish perfect harmony between individual demands, educational opportunity and social requirement, and that even such a system, precisely speaking, cannot implement equality of opportunity, but can only reduce the inequality of opportunity.

Common views and differences in view over individual concrete measures will be described in the following sections. Here the proposals of the Education Council and Science Council of 1970 are guidelines. The main emphasis lies on questions of the organisation and structure of the system. These however have to be seen only as the precondition for the really decisive thing: the creation of a differentiated learning offer for the individual that avoids early fixation and whose primary principle is not selection but promotion. This is not understood as a rejection of attainment, but is based on the conviction that through a differentiated offer, the motivation and attainment of all will be increased and a selection of the best made possible.

2.1 Pre-School Education (Elementary Sector)

The reform plans proceed on the assumption that it is precisely the early years of childhood that are decisive for the development of learning and speaking abilities and for the education of creative imagination. The Kindergarten should be expanded into a first phase in the educational system. The first and second year in the elementary sector are the basis for educational and upbringing work among the three and four-year-olds. The third year in the elementary sector (five to six-year-olds builds up on this and leads on in continuity to the learning objectives of the reformed Grundschule. Attendance should continue to be voluntary, but it is estimated that the great majority of children will attend such early schools. This means the necessity of at least doubling the number of existing places and of developing the curricula for the new tasks as well as for the training of the staff. Staff and financial requirements will increase by more than 100 per cent, because better equipment and smaller groups are necessary for the new work. It is precisely in this phase of the educational system that the possibilities of expansion and reform are conditioned at least more strongly in the medium term on the number and quality of the staff than on finance considerations. The experience gained on model tests and experiments should be examined as to whether the educational offer for the five and six-year-olds can be united organisationally. Close co-operation between the elementary and primary sectors is necessary.

In settling administrative and educational supervision problems, social pedagogues should be employed in order to avoid the danger of too early "schooling".

As far as substance and priority are concerned, the aims are not disputed by either side. In all the Länder, individual experiments are taking place, and expansion plans, detailed and concrete, are available for all the Länder. The Federal Government has promised them highest priority in the "Educational Report 70".

There is also agreement that the expansion and the new substantial objectives can only be implemented in co-operation with the private sponsors (see II, 3.1.2.), but they demand stronger public support than previously. As far as the most important questions are concerned - distributing the financial burden between local government, the Länder, private sponsors and at present also the parents; also the settlement of the questions of administrative and educational supervision - the regulations in the Länder differ from one another in some details and it is possible that certain differences will remain in future.

2.2 The Grundschule (Primary Education)

The present Grundschule begins after the sixth year of life and lasts four years. Reforms and model experiments within this system are described in II.3.2. The Education Council recommends bringing forward the age of compulsory schooling to five, that is by one year. The first two years (ages five and six), as the "entry level", should then form a special educational unit providing a transition from pre-school education to the sector of real school learning. After four years, the new Grundschule could make possible the transition for nine-year-olds to the "orientation level" of the secondary level I. In its recommendation of 2nd July, 1970 on work in the Grundschule, the Kultusministerkonferenz developed widely similar objectives parallel to those of the Education Council. However, it did not go closely into the question of the future duration of the Grundschule, but did on the other hand deal in more detail with transition regulations to bring about a phased improvement.

The ideas on new, more strongly subject oriented curricula based on a more scientific knowledge at the Grundschule are generally accepted and have in part already been realised. Also the demand for the establishment of classes for five-year-olds is popular and is supported at a political and administrative level. In recent years this has led to a growing number of experiments with "pre-school classes" for five-year-olds in all the Länder. On the question of whether these facilities should be expanded further as voluntary pre-classes or whether compulsory schooling should be advanced by one year, there is no generally unanimous opinion. However, there is wide support for the proposal of the Education Council. People are clear about the fact that the advance by one year can only be implemented if the staff, material and above all curricula preconditions are created. The Federal Government has given its support to the expansion of voluntary pre-classes and the development of curricula, which should be planned in such a way that the general advancement of school entry by one year can be effected in 1980.

On the question of the duration of Grundschule education, there is no clear and uniform opinion to be detected at political level. School development plans in the individual Länder that have been drawn up recently proceed, according to the recommendations of the Education Council in medium-term planning, from a move to the orientation level at the age of nine.

Other Länder are however inclined so it seems to have a further four years of Grundschule following the pre-classes and to take a decision on a change only when experience has been gained with new curricula for the Grundschule and the orientation level.

With regard to the evaluation of the reform plans for primary education, an appropriately higher qualification for teachers is of special importance. During recent years, the tendency has gained ground to develop subject emphasis for the primary sector as part of the training for the still uniform teacher-training for Grundschule and Hauptschule. Apart from this, the equality in value of the training for primary education and for teacher training for secondary education has long been recognised.

2.3 Secondary Level I

The secondary level I includes grades 5-10(1):

1. Hauptschule (5-9, at present also a voluntary grade 10);

2. Realschule (5-10);

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1) In those cities constituting in themselves a state (Land), classes 5 and 6 are, to some extent, still combined and form part of the first level primary school.

3. Grades 5-10(1) (lower and middle level) of the Gymnasium.

In all the Länder there are separate school experiments with integrated or co-operative comprehensive schools at the secondary level I. The establishment of these experiments is based on a recommendation by the Education Council of January 1969. In two Länder - Hesse and Berlin - the Gesantschule is a regular school form alongside the traditional forms in the vertically subdivided system mentioned above. Longer term planning in these countries is aimed at the general integration of the secondary schools.

The question of organisation form of the secondary level I is central to the educational policy discussion. Criticism is directed mainly at the fact that - despite a number of reform measures to ease the move to the Realschule and the Gymnasium also after the fifth school year and to improve alternative educational openings via the Hauptschule - the organisation form, the selection process and the traditional superiority of philological-historical qualification criteria make education openings too strongly dependent on social milieu and the educational content has to be oriented more strongly on the conditions in present-day society.

The most important elements of the Education Council recommendations for this sector are:

1. Extension of full-time compulsory schooling - also the Hauptschule - by one year;

2. The curriculum should be oriented on science and academic instruction in all school forms and from grade 7 onward should make possible to an increasing extent the differentiation according to inclination and attainment.

3. The institutional and curricula conditions provide a qualified certificate at the end of 10 years at school - called Abitur I. Which other educational possibilities are open to the pupil depends on the content and the level of efficiency attained in previous education. These are revealed in the "individual profile" of the Abitur I.

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1) In the city-states, grades 5 and 6 are in part still combined and are part of the Grundschule.

4. In the eleventh year, there is to be "compulsory education", which can be undergone at school or in any other suitable (e.g. industrial or supra-firm) establishment.

5. Grades 5 and 6 are to become a special unit as an "orientation level" and will prepare the pupils for the possibilities of selection and differentiation in the ensuing years. They are arranged according to pragmatic rather than fundamental considerations and will become part of secondary level I. They can also remain part of the Grundschule where the preconditions for this exist - as in the city-states which have six-year Grundschulen. The decisive thing is that in these classes pupils are not tied to certain forms of school or educational courses.

It is clear that this concept of a new secondary level I follows up the tendencies in individual reforms that have already been made (above all the expansion of the Hauptschule including grade 10 to the "mittlerer Abschluss", various models of the promotional and observational level in grades 5 and 6) but is new inasmuch as it combines existing trends and develops these systematically.

In view of the function of the "orientation level" and the demand that every pupil should have an equal opportunity of attaining the Abitur I, the question of organisational form loses weight. The Education Council places great importance on the testing of Gesamtschulen in model experiments, but in its structural plan proceeds from the assumption that this can be implemented also within the existing three-part structure of the secondary level I.

The Ministers of Culture, in their report on the structural plan, widely share the view of the Education Committee and point out that a start has already been made to realise a number of the plan's objectives.

The Federal Government has adopted the demands and ideas on content and has clearly stated its view that these can best be implemented in practice, for educational, organisational and economic reasons, in a differentiated and integrated Gesamtschule. Also the CDU/CSU party - which at present forms the opposition party in Bonn and in a number of Länder, but forms the government in other Länder - approves the objectives of the secondary level I, but in the question of organisational form, however, advocates tackling the reform on the basis of the three-part system and then waiting for the development of model experiments with Gesamtschulen, which have been agreed on by the Kultusministerkonferenz on the basis of a recommendation by the Education Committee. Also in those Länder where a fundamental decision has been taken for a horizontal structure in the secondary level, i.e. for Gesamtschulen, it is realised that putting this into practice will be a long-term process. In any case, one of the main tasks of the coming years will be to improve the facilities of the existing school forms in such a way and to remove any discrepancies that the demand for equal educational opportunity and qualifications can be met.

In the discussion about these questions, one fact plays an important role, and that is that between the teachers in the three forms of school - that is to say for the same age-group of pupils - there are differences in the training and remuneration. At the end of 1970, the Ministers of Culture agreed on a number of fundamentals for the reform of teacher training, among others that such training should not be differentiated according to forms of school, but according to school levels, i.e. primary education, secondary level I and secondary level II. The discussion is still going on, but there is wide acknowledgement of the principle that the equivalence of curricula and the final examinations also determine the equivalence of teachers' qualifications and the preconditions for educational work (material facilities, number of compulsory lessons for teachers, number of pupils per teacher).

3.4 Secondary Level II

The secondary level II embraces:

1. the upper level of the Gymnasium (grades 11-13);
2. schools in the vocational education system leading to the university (Hochschulreife), e.g. Fachoberschule and Kollegs(1);
3. other full-time schools in the vocational education system, e.g. Berufsfachschulen(1);
4. vocational education sponsored by firms and supra-firm institutions (dual system) together with the Berufsschule (part-time education)(1).

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1) For details see II, 5.2

A number of institutions at this level (Höhere Fachschulen, Ingeniuerakademien) are at present in transition to institutions in the university sector.

The traditional Abitur forms the conclusion of the Gymnasium. It embraces the general Hochschulreife, which in turn is the precondition for *every* kind of academic study. The university-oriented education at a Gymnasium on the one hand and its importance for university study on the other, as well as university access, is made clear by the fact that about 90 per cent of all Abiturienten take up studies, and that a still higher percentage of all students come from Gymnasien. Until the introduction of the Fachoberschulen, there were already alternative ways to university study apart from the Gymnasium. These of course were not as important as the Gymnasium.

Reform thinking is aimed at providing wider possibilities of emphasis on certain subjects according to inclination and attainment in all school forms through new curricula, forms of organisation and qualifications to improve the academic level and at the same time to do away with channeling future openings through attendance at any chosen school.

This means on the one hand that the possibilities of acquiring university qualifications in the vocational education sector will be expanded, and on the other hand, that more attractive alternatives to university study will be created for Abiturienten of the Gymnasium. This offers simultaneously the need and the opportunity of ending the traditional prestige difference between so-called general education and vocational education.

Within the scope of vocational education, it is mainly a question of acquiring special qualifications on a broad basis, as well as taking into account the increasing demands of the working world in scientific and specialist knowledge and in the ability of people wanting to learn further, improving the opportunities for advancement of the individual and at the same time enlarging the scope for individual decisions, i.e. personal freedom.

The Education Council and the Science Council have co-ordinated their recommendations for this sector. The core of the reform proposals is here too the shift of emphasis from the question of organisation forms to that of individual educational courses and options. The possibilities of free choice and emphasis on certain subjects are to be increased over past years, and grouping in age-group classes is to be replaced by a flexible system of courses. Content and standard attained in the individual educational course in the secondary level II will be reflected in the "profile" of the final qualification, the Abitur II. The qualifications are accordingly differentiated. Such qualifications are tied to the final qualification for vocational education and activity, and/or for the university sector.

The Kultusministerkonferenz, in its report on the structural plan of the Educational Council, has termed the reform of the upper grades in the secondary level one of the most urgent areas for school reform. It pointed out it is already developing a programme of upper grade reform. According to the Ministers of Culture, a reform of the upper grades in secondary education has to involve the adoption of a partly overlapping and partly differentiated system of subjects, which provides scope both for the abilities and the optional subjects and attainment areas, as demanded by the requirements of the various sectors.

The grade principle is to be dropped. Courses determined by subject and theme are to be offered. The choice is to be left to the pupil under certain conditions (appropriate distribution in linguistic, political, mathematical-natural science, and cultural artistic sectors). The courses are not to be linked to age-groups. A new system of attainment evaluation, the introduction of crediting and changes in the final examination are foreseen. A logical consequence of this reform will be that the total education period up to the final examination in the secondary level II will no longer be based on a firmly laid-down period of schooling, but will be variable according to the speed of learning of the individual and the attainment sought in the final examination.

The Education Council proceeds on the assumption that this Abitur II at full-time schools can be acquired as a rule in two to three years. The Federal Government has come down in favour of a two-year period for a study-oriented Abitur II. There is agreement however that efforts must be made in any case to reduce the high average age of today's Abiturienten and on the other hand give the individual more time for the secondary level II. This will apply mainly to those who also acquire a qualified vocational education.

These reform plans as well as the discussion on the Gesamtschule lead to the point that also the organisational integration of vocational and general education schools in secondary level II is being sought and that appropriates experiments are being made. These plans concern firstly the

Gesamtschulen in the secondary levels I and II, and secondly the possibility of separating the upper grade of the Gymnasium from the previous grades and of combining in the form of co-operation or integration with the other school forms of this level which are part of the vocational education system (e.g. Fachoberschule, Berufsfachschule). Such experiments are under preparation in all the Länder. In the near future the Education Council will augment its more general 1970 recommendations for this sector with concrete and detailed proposals.

Of course, one can also see in this development the danger that the integration of vocational and general full-time schools will lead to a situation where the Berufsschule (part-time school) will be isolated and left behind and that the full-time educational courses qualifying for vocations will lose their own value. For that reason, a start has been made to improve the vocational education system and to integrate it, to carry out reforms in education in the dual system, and to expand the possibilities of acquiring the Abitur II in the vocational education system.

Vocational education in the "dual system" of Berufsschule (part-time school) and training in the firm may decrease in favour of full-time school education and training courses, but will most certainly still remain by far the biggest sector within the vocational education sector. Improvements and reforms in this sector have been prepared through a number of measures as described already in Part II. Important organisational preconditions for a detailed reform plan have been created with the vocational education committees at Federal, Länder and local authority levels and the Federal Institute for Vocational Education Research. The plan can only be realised with the close co-operation of industry, the sponsors of factory training and with the future employer of the trainees. These too play a part in the development and implementation of the plan.

In November 1970, the Federal Government gave a pointer for reform planning in its Action Programme for Vocational Education. New educational policy shifts are made clear in the introduction:

"Vocational education should not be the Cinderella of educational policy and may not lag behind school and university reforms. For decades, it has been primarily understood as a self-administration task of industry. The Federal Government pays tribute to industry's educational efforts. Today, however, the same educational-policy and educational principles must apply both to trainees and to pupils and students. A new orientation in vocational education has become unavoidable. The Vocational Education Law is a first step to reform. But things cannot stop at that. For that reason, the Federal Government presents herewith an action programme containing interlocking measures for the further development of vocational education".

The catalogue of principles, objectives and measures which then follows proceeds on the assumption that the co-operation between State and industry, as manifested primarily in the "dual system", will be maintained, but that the overall system will be improved and public responsibility for the overall system be increased. The individual measures extend from pre-vocational education measures (in particular vocation-oriented curricula in general schools) and careers advisory services on vocational training (improvement in the vocational school/Berufsschule and the co-ordination of school and factory training; new curricula for basic vocational education and phased education; the development of training means; an improvement in quality control, information on vocational education; rulings on protecting young working people; qualifications for instructors and training firm and co-determination in training questions) to vocational educational research, further education and retraining (educational leave; qualification openings based on the "building block system").

Planning demands quantitative forecasts or objectives. Relevant calculations have been done at State level mainly by a working group of the Kultusministerkonferenz and of the Science Council. The Science Council proposes to proceed in the planning from the assumption that in about 10 years roughly half of one age-group will acquire the Abitur II, and that about half of these - that is to say about 25 per cent of one age-group - will study at a university. Account should be taken here of the fact that institutions other than those today will belong to the university sector. However, the comparison with the present transitional quota to the university, Technische and Pädagogische Hochschulen, which in the course of the sixties rose from about 50 per cent to about 80 per cent and has already led to an overcrowding of the universities, shows that here a capacity requirement has developed that cannot only be covered through increased expansion measures.

For the sector of vocational education, no such comprehensive planning data exist. The general development and regional forecasts point to the fact that flow to specially qualified educational courses will continue. This will be the case in particular when the great majority of pupils have acquired the Abitur I and when the possibility of acquiring the Abitur II in the vocational education sector has been expanded.

2.5 Special Schools for Handicapped

The various forms of special schools for handicapped children have been expanded in recent years under a priority programme. Reform thinking is now devoted especially to increase the number of secondary level special schools for physically handicapped children, as well as testing curricula and technical teaching aids that permit the promotion of one part of the children sent today to special schools and to promote the re-integration from special schools to general schools.

2.6 Foreign Children

The roughly 100,000 children of foreign workers in the Federal Republic form a special problem. Children of compulsory school age can seldom take part with any success in normal lesson, because of language difficulties. The Länder and the local authorities, in co-operation with the home countries' authorities and diplomatic missions, are trying to develop programmes and institutions which make possible successful work in German schools and maintain at the same time the connection to the language and culture of the home country. Special reference is made, especially within the framework of the "International Education Year", to the tasks arising from this in the sector of education research, the organisation of lessons, further training for teachers and the development of curricula.

2.7 Higher Education (Tertiary Sector)

The constitutional changes introduced in 1969 had a far-reaching effect on this sector of education. The University Building Law, which came into effect on 1st September, 1969 and was brought up to date on 3rd September, 1970, contains a new planning system(1) for university building and extension, which is now the joint task of the Federal and Länder governments. This new system embraces all institutions of higher education, in other words universities, technical universities, teacher-training colleges, academies of sport and art, polytechnics, etc., thereby starting from the functional unity of higher education. The purpose of these joint planning measures by the Federal Government and the Länder authorities is to provide, as far as possible, sufficient places at the universities and other institutions of higher education based on foreseeable requirements and also on the expected long-term demand for university graduates.

Building and extension targets are laid down in a joint overall plan(issued for the first time in 1971 for the period 1972 to 1975),which will be carried forward every year, based on the

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1) cf. II.8.5

requirements of the individual Länder and on the recommendations of the Science Council. Decisions on the overall plan are taken by the Planning Committee consisting of representatives of the Federal Government and the Länder governments with each Land having one vote and the Federal Government the same number of votes as all the Länder together. Three quarters of the votes cast are required for the adoption of the overall plan which will oblige the Federal Government and the Länder Governments to make provisions in their budget estimates for the funds necessary to implement it. The Federal Government is pledged to provide 50 per cent of the investment costs for the building and extension of universities.

One of the most important prerequisites for the overall plan are preliminary estimates of the numbers qualifying for university education, the number of freshmen and the total student population, the distribution of students among the various Länder, fields of study and the function and duration of courses, as well as the cost of appropriate university extension. At the same time, as part of their researches in connection with the Overall Educational Plan (see III, 3.) the Federal Government, the Länder and the Science Council are ascertaining these basic data, initially for the year 1975. It is assumed that by 1975 the total student population will be 680,000.

The preparations for the first overall plan for university extension and building have shown that the available statistical surveys and other records furnished by the Länder are no longer adequate for contemporary university planning. In order to ensure that the necessary statistical material will be available up to date and coherent for the whole of the Federal Republic it is proposed to introduce statistics on higher education on the basis of a federal law. Almost all of the Länder have agreed to this proposal in principle and the first draft law will be submitted in 1971.

But apart from supplying more university places, the internal structure of the various institutions needs to be changed at the same time. The essential principles on which such changes will be based will also be laid down in the Overall Educational Plan. On legal grounds and for the sake of expediency, statutory regulations are required for the implementation for many of these measures. The legislation on higher education adopted by the Länder in recent years has already initiated the restructuring process. Through the amendments to the constitution, which came into effect in 1969, the Federal Government has the right to issue in the form of a law skeleton provisions on the general principles of higher education. In order to exercise the necessary influence on development in the field of higher education and to secure uniform legislation throughout the Federal Republic, the Federal Government intends to exercise that right as soon as possible. In December 1970, therefore, it submitted a draft framework law on higher education which will shortly be debated by the Bundestag.

This bill, the main points of which have been approved by the Länder, must, in view of the narrow scope which the Federal Government has in this field, be confined in principle to drawing up guidelines for measures to be applied in the various Länder, and only in a few exceptional cases can it introduce regulations that have direct validity in the tertiary sector. Essentially, the bill embraces the following:

The reorganisation of studies and examinations is regarded as the basis for all reform measures and at the same time as a permanent task for all concerned. In spite of the efforts made over many years to reform university education the current study system in nearly all branches fails to take into account new teaching methods. Nor, in the present situation does it help to reduce the length of courses. However, legislation can, as a general rule, only initiate and provide the stimulus for the radical changes that are necessary. The purpose of all courses of study should therefore be to instill in participants the ability to perform scientific or artistic work and to think and solve new problems systematically.

Courses should not be aligned to narrowly defined careers but rather constitute the basis for wider possibilities of development, especially in the form of further education (see II, 8).

Furthermore, it is proposed to enable students to take at one and the same university courses that are more research- and application-oriented. All courses of studies and examinations in the whole sphere of higher education are to be related to each other within a co-ordinated system. Such a system will require a number of new courses of study which in most cases will be completed within three years. Scientific and technological developments and changing patterns of professional life also call for a greater variety of contact studies within a more systematic framework.

The reorganisation of existing courses of study and the development of new ones is a measure which goes beyond the scope of the individual university. It has therefore been proposed that the Länder should appoint commissions on study reform consisting solely of members of the universities, though free to call upon the advice of experts from the professional associations, trade unions, and representatives of government agencies, to elaborate appropriate recommendations. The Länder can insist that the universities adapt their courses and examinations to the recommendations made by these commissions.

As in the past, state and church examinations will be of equal status. It is still uncertain whether, in the course of time, such examinations can be dispensed with in favour of university examinations, but in any event they should as far as possible be on the same basis as university examinations.

However, one of the main aims of these reform measures is to reduce courses of study to reasonable length which should clearly be below the present average. Syllabuses should be such that present courses (with the exception of medicine) can be completed in about four years, teacher-training, depending on the qualifications sought, in three to four years, and courses more applicably oriented in about three years, as is already the case at specialised institutions of higher education (Fachhochschulen). This will be a very important development and it will increase the output. Up to now, institutions of higher education have differed according to their admission requirements, their functions, and their status, but as a consequence of the review of courses and their content it is proposed to group these various types of institution into one new system in which all will be on the same footing. The Federal Government therefore aims at establishing what is known as integrated comprehensive universities. The essence of this system lies in the fact that it embraces all the functions that were previously performed by various types of institutions. The comprehensive university will afford different courses of study, thus providing a wider range of related possibilities based on the close link between teaching and research. This link may differ from the more research and application-oriented courses of study, and it may be of differing intensity. Not every course offered at the comprehensive university must involve direct participation in research. It is not necessary for such an integrated institution to offer courses in all fields, nor, probably, would it be possible. The idea should be to create different concentrated areas of study based on the principle of division of labour. Such main areas should comprise in particular courses of teacher-training which in the past have been offered at different institutions depending on the category of teacher, as well as the more research- and application-oriented courses in the fields of engineering, economics and social science that are at present partly still offered outside the tertiary sector.

Some Länder feel the comprehensive university should not be introduced as a standard type since local conditions, and especially the area covered, will not always meet the requirements. It will also be necessary to consider how to include some of the existing universities that are unfavourably situated for integration in the comprehensive university system. In this, and in other respects, special importance attaches to co-operation with other institutions of higher education. With this in mind, some Länder have begun by developing models of co-operation. Even if all concerned make every effort, a system of integrated comprehensive universities will take several years to establish, proceeding in stages through different forms of co-operation among the existing institutions. Reorganisation and redefinition will not be the answer in themselves. Much will depend on the revision of subject-matter.

The integration in the comprehensive university of courses that have up to now been offered by different types of institution is bound to have consequences outside the tertiary sector. In the public service in particular it will be necessary to review the current career system which, based on the distinction between administrative and executive grades, is oriented to the present system, making allowance for developments in the tertiary sector.

In developing a new system of higher education and establishing comprehensive universities, it will also be necessary - indeed it will be one of the prerequisites - to revise the regulations governing academic and artistic staff at the universities. The present regulations allow for distinctions between individual universities which are no longer justified and have also led to the creation of a variety of posts that are not commensurate with the tasks involved and have led to considerable hierarchical confusion. The new regulations will be oriented to the actual functions within the university. In future the only full-time staff at the university will be "professors" (usually holding a permanent post) and "assistant professors" (posts to be held for six years at the most). In addition, there will be the academic and artistic staff as well as teachers for special tasks who, however, will be required for certain subjects only.

In order to cope both inside and outside the university with the scientific tasks of tomorrow, the nature and extent of which are constantly changing, special efforts will be made to promote the training of qualified academic personnel. For this purpose, the Federal Government is preparing a law under which graduates with a special aptitude for scientific work will be granted scholarships, usually for two years. The aim of this assistance is to enable recipients to study for doctorates and thereby, it is felt, render an important contribution to research, or to participate in advanced studies organised by the university and play a larger part in research projects. Such scholarships will be worth DM 900 per month irrespective of the recipient's family status.

Various measures, some of which have already been introduced under Land legislation and are envisaged in the draft general law on higher education prepared by the Federal Government, will be applied to improve the organisational structure of the universities. It would take too much space to go into detail on the regulations introduced by the Länder. Below, therefore, is a summary of the Federal Government's concept. The old, and in some cases current, system of separate university and state administration should be replaced by a uniform administration which will attend to both university and state matters together. It is also intended to add further emphasis to the principle of university self-government. It is proposed to strengthen the university's autonomy by restricting the state's possibilities for intervention to questions of legal supervision. In some fields, especially in connection with study reform and higher education planning, new forms of co-operation between government and university will have to be developed so as to close the sharp division between their respective affairs.

The basic organisational units of the institutions of higher education will be the specialised areas which will assume the functions of the faculties and institutes. Decision-making organs can only exist on the specialised field level and on the higher level of central governing bodies in order to ensure a clear distribution of responsibilities for the various functions of the university.

The head of the institution will no longer be able to hold office on a part-time basis and for a relatively short period of time, as has been the case up to now under the rectorial system. He must in future fulfil his responsibilities on a full-time basis and for a longer period. For this purpose it is proposed to introduce a presidial system.

The question of the participation of various groups within the university, especially the students and the academic assistants, in the process of self-government has been a highly controversial issue in recent years. On the whole the demand for "one-third parity", in other words the equal representation of university teachers, assistants and students in the governing bodies, has not gained acceptance. Under the framework law drafted by the Federal Government, it has been proposed that, on substantive grounds and for reasons of expediency, all members of the university, that is all staff and students, should enjoy participation in university self-government commensurate with their functions. This principle has already been applied in some of the Länder. This means that the nature and extent of the participation would depend on the tasks to be fulfilled and on the qualifications and functions of the members concerned. Participation can take several forms, e.g. co-decision, consultation, and by exercising the right to express one's views, to request information, or to raise objections. Under this system the members of the university are pleged to adopt a co-operative attitude in order not to endanger the functioning of university management. At present the Länder are experimenting with various forms of participation.

Over and above their previous tasks, the universities will in future help in the planning of extension measures by drawing up their own development plans, which will contain proposals for the development of the university's various departments and at the same time serve as basic material for overall planning in the tertiary sector on the part of the Land. For this purpose the universities will require the source data and the funds and facilities required for planning.

The quantitative expansion of the tertiary sector and the alteration of university structures should ensure that all entitled to a university education will have a place available, though it will not be possible to guarantee that every would-be student will be able to study the subject of his choice at any university and at any time. However, it is proposed to introduce a system whereby students can obtain advice on career and study possibilities and information on vacant places at universities in order to ensure that the effects of the numerus clausus, which is still necessary at some institutions, can be mitigated and that prospective students, will, therefore, not be excluded from university education altogether.

2.8 Further Education

The ambit of further education has widened in recent years. Increasing mobility on the labour market has convinced the working population that they require additional knowledge if they wish to change their occupation or to get on in their present one. In this context further vocational education is of growing significance. The Labour Promotion Law and the Vocational Education Law have provided new incentives - also financial - and possibilities for this branch of education.

As the continuation or resumption of "organised learning" after the conclusion, or a break, in the first phase of education further education is to be developed into an independent sphere of education which will embrace new departures in addition to the still separate fields of further vocational training, political and general adult education. In this sense educational opportunities will make for equal opportunities between the generations and are therefore a social objective of high priority.

The institutions of further education should enable participants to prepare for examinations which they could not take at school and to acquire qualifications for advanced courses, to prepare for professional change or advancement, and present the material in a way suitable to adult needs. Further education for members of professions that presuppose a university education is to be provided not only in the form of follow-up studies but also of courses sponsored by the professional associations and their establishments, in research centres, hospitals and public authorities. It is proposed gradually to grant employees paid leave to attend courses of further education. An appropriate scheme is under preparation. Agreements will be concluded and regulations adopted relating to the obligations of all sponsors of further education, including institutes of education by correspondence, to supply and exchange information on their courses and participants in order that a wide range of information will be available to those interested in further education so that local and regional co-operation and division of labour may be improved, and material gathered for comprehensive statistics on further education. In this connection, the work of private industry in the field of further education should also be taken into account, particularly as their expenditures can in most cases be deducted from taxable income. Such information should at the same time serve as the basis for calculating what institutions of further education will be required.

Programmes such as the "basic studies programmes" and the certificate courses organised by the German Association of Adult Education Institutions for languages and mathematics will play a large part in the future development of further education. They include complete courses leading to their own examinations. This year two central offices were opened to scrutinise courses of correspondence education and the institutes offering them. As far as vocational education is concerned, the newly established Federal Institute for Vocational Education Research will perform this task, whilst other spheres of education will be covered by the Central Office of Correspondence Education established jointly by the Länder.

In expanding further education special consideration should be given to remote rural districts. Such areas require courses by radio, television, letter instruction and mobile libraries. In this way further education can help to close the educational gap between rural and urban communities. A fully developed, co-ordinated system of further education can, with a heavier financial outlay, which would be comparatively less than in other fields of education, achieve a particularly high degree of effectiveness.

The German Libraries Association has drawn up a library organisation plan in collaboration with other leading library associations. It proposes the introduction of more stationary and mobile libraries and the enlargement of all book stocks. It also envisages the build-up in stages of a rapidly functioning link-up between all libraries, including specialised libraries, so that it will be possible to supply any information at any time to any place.

A special working party appointed by the joint commission of the Federal and Länder Governments for educational planning is at present drawing up proposals for a concrete plan for the quantitative and structural development of further education in the next fifteen years.

3. Educational Planning

As mentioned in Part I, constitutional amendments introduced in the spring of 1969, gave the Federal Government increased financial and legal responsibility for individual sectors of education and research and created the basis for joint educational planning by the Federal Government and the Länder. Pursuant to this change in the constitution, a Joint Commission on Educational Planning was appointed by the Federal Government and the Länder within the framework of an administrative agreement signed in the summer of 1970 (see Annex 3). The Commission has undertaken to prepare by the middle of 1971 an overall plan for the structural and quantitative development of education and a corresponding budget. It is working on the basis of the existing reform plans and calculations of the various advisory bodies (Education Council, Science Council) as well as on the regional and sectoral plans and forecasts made in the Länder(1), and by the conference of Ministers of Education and the Federal Government. The most important aspects of these reform plans are reviewed in chapter 2 of this part. The preparatory work is undertaken by several committees and working groups comprising representatives of the Federal and Länder authorities. The most important of these are:

(1) The Overall Educational Planning Committee

This committee prepares the outline which includes

- data on prospective quantitative and qualitative developments up to 1985
- nature and timing of major structural changes in education
- a catalogue of the fundamental decisions which the overall plan will require and which the Joint Commission would need to make.

The committee has five working groups: "elementary, primary and secondary sector", "the tertiary sector", "further education", "personnel in education", "buildings and equipment". Together with the Educational Budget Committee it has formed an ad hoc working group to prepare a "catalogue of questions". The group have meanwhile compiled the essential basic data in collaboration with the Secretariat of the Conference of Ministers of Education and the Federal Office of Statistics.

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1) For the survey on the school development plans of the Länder, see Addendum 38.

(2) The Educational Budget Committee

In order to be able to estimate financial expenditure this committee is dependent on the appropriate data it receives from the Overall Educational Planning Committee. A working group was appointed to work out a standard costs programme for the Budget Committee's plans with the aim of calculating the corresponding financial requirements as directly as possible on the basis of quantitative data provided by the Overall Planning Committee on the development of education in successive planning phases (1975, 1980, 1985).

(3) The Committee on Educational Innovation

Within the framework of joint Federal Government/Länder activities, this committee will make, on the basis of agreements, recommendations on (a) the sponsoring, co-ordination and evaluation of model experiments in education, (b) the sponsoring and co-ordination of curriculum development and testing, and (c) the sponsoring and co-ordination of educational research. The Federal Government will meet part of the cost of this work. At present, the Committee are preparing the agreements which will regulate co-operation and establish the legal and organisational basis.

Another committee is concerned with the promotion of research and the co-ordination of the research policies of the Federal Government and the Länder, whilst a special working group is continuing the preparatory work for the institution of a national system of "correspondence studies through all media in partnership" (Fernstudium im Medienverbund).

In its initial phase of work the Joint Educational Planning Commission has no alternative, in view of the time limit, but to rely on existing planning data and methods. However, it is to be expected that it will in future endeavour to improve the organisation and methods of educational planning and to ensure its co-ordination at federal level. Pursuant to an amendment to the Basic Law in the spring of 1969, the Federal Government's budget now earmarks funds for co-operation with the Länder in the development of appropriate systems and methods applicable to statistical surveys, prognosis, documentation and information in educational planning and research. This makes it possible to promote initiatives of the Länder and private foundations - especially the Volkswagenwerk Foundation in the field of educational research and in the build-up of a higher education information system - which, especially in recent years, have been considerably intensified and the methods perfected, and to put them into effect at federal level.

4. Educational Research and Innovation

The description of reform plans and decisions in the field of education policy for the most part involve questions of structure and final qualifications. However, all parties concerned agree that these are only the organisational prerequisites for and the formal consequences of internal development and reform. This reform must be prepared by means of educational research, tested and controlled, and a constant process of innovation made possible by appropriate organisation and measures.

Research in the field of education has been considerably intensified in recent years, largely as a result of co-operation with the Council of Europe and O.E.C.D. The initiative has come from research institutions and universities, education departments, foundations, the German Education Council and the Science Council. In 1969, the Conference of Ministers of Education drew up a list of fields in which research was to be concentrated. Educational research is done by non-university institutes, institutes associated with the education authorities, university institutes and individual research workers.

Reference has already been made to the most important innovations in the development, testing and introduction of new curricula (e.g. the development of new curricula at Land level for the Grundschule and the Hauptschule by commissions of scholars; the work of the Federal Institute for Vocational Education Research; the experiments with comprehensive schools, all-day schools, pre-school classes, basic vocational year at the Hauptschule, etc.). The Volkswagenwerk Foundation has announced a project "curriculum for the elementary sector", and in some Länder large institutes have been established for research and development in the field of instruction technology and programmed learning.

In view of the tremendous tasks of the future, however, the present capacity is insufficient. This is not only a question of qualified personnel and finance but also of effective co-ordination, information, and innovation. The planning of a suitable infrastructure is one of the most important tasks of the Joint Commission and is being prepared by its committee on innovation. The measures envisaged in this connection range from the determination of priorities and financing to the establishment of a network of institutes of research, documentation and curriculum development.

5. Financing and personnel

The expansion and reform of education require, according to the current estimates, an unusually big increase in public funds. The Joint Commission is preparing an educational budget and the scope and timing of reform measures will no doubt be reviewed in the light of the financial conditions and possibilities.

The Science Council and the Education Council estimate a considerable jump in public spending on education in the years ahead. These estimates and the calculations of the Educational Budget Committee will help to give final shape to the financial requirements, which, together with the Overall Educational Plan, are to be published in the summer as the Educational Budget. It can already be said, however, that the magnitude of the necessary reforms and their financial implications will force the authorities to venture along hitherto unknown paths.

A very important aspect of educational financing is the question of teaching staff, who must be better qualified and available in greater numbers. The following table indicates the numbers of teachers at different types of school:

Full-time Teachers in the Federal Republic of Germany
School year/winter half-year(1)

Type of school	1959	1961	1963	1965	1967
Volkschulen(2)(3)	143,522	148,154	155,089	164,485	176,187
Sonderschulen	5,859	6,776	8,057	9,590	12,650
Realschulen	14,006	15,317	18,272	20,500	25,723
Gymnasien(4)	43,014	43,879	46,966	47,966	54,996
Abendrealschulen	35	39	34	37	52(6)
Abendgymnasien	195	203	243	254	265(6)
Kollegs	16	98	199	307	381
Berufsschulen	23,828	23,689	23,755	24,355	24,819
Berufsaufbauschulen				576	637
Berufsfachschulen	7,340	7,447	7,529	7,759	8,586
Fachschulen(5)	6,840	7,219	7,033	6,764	6,095
Technikerschulen				506	642
Ingenieurschulen	2,404	2,760	3,389	4,314	5,097
Anstalts- und Studienseminare	1,283	1,336	1,633	2,079	2,696(7)
TOTAL	248,342	256,917	272,247	289,501	318,876

+ Public and private schools

(1) As of: Volksschulen, including Kollegs, from 1959 to 1966 - May, in Bavaria October; 1967 survey in October in all Länder; Berufsschulen, including Ingenieurschulen - November; Berufsschulen including Fachschulen in North Rhine-Westphalia 1959 to 1965 - 15th May; 1966 - 15th June; in Rhineland - Palatinate - 15th June; Anstalts- und Studienseminare - in each case the end of January.

(2) Including the corresponding teachers at schools in Hamburg and Bremen that have been re-organised.

(3) Including all teachers at the private Waldorfschulen (primary level).

(4) Including all teachers at the Waldorfschulen (upper level).

(5) Excluding teachers at public health schools.

(6) Excluding Berlin.

(7) Excluding Bavaria.

Source: Federal Office of Statistics.

Though the numbers of teachers are increasing there is still a great shortage. Recruitment and requirements have varied not only from Land to Land but also from subject and school-form. As a result, the shortage of grammar and vocational school teachers, especially for mathematics and science, is alarming. The situation in the Hauptschulen is improving now that more pupils are transferring to other continuation schools. The rise in the number of grammar school pupils, and hence of students, including those intending to enter the teaching profession, justify the forecast of a big improvement and hence wider scope for reform.

The outline of a plan for the reform of teacher training developed at the end of 1970 by the Conference of Ministers of Education is described in II.6. It proposes that, in training, status and teaching, there should be no distinction as to type of school but only as to the school level at which taught - a decisive factor in the structural reform by education. Moreover, the plans of the Länder and of the Joint Commission advocate that, in order to make the educational system more efficient, teachers should have better opportunities for acquiring additional qualifications through further education (e.g. educational guidance, curriculum development, test procedures) and that greater use should be made of personnel from other spheres. These could be assistants for administrative work, instruction technology and science, also psychologists and specialists in educational guidance. Some experiments are already being made, particularly in connection with comprehensive schools.

Finally, there is an urgent need to develop and extend new courses of training and careers for teachers in pre-school and further education. The Joint Commission are preparing the groundwork for this, as well as requirement estimates on the basis of the recommendations of the Education Council.

Part Four

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Explanation of Symbols

- = Not applicable

0 = More than nil, but less than half of smallest unit presented in the table

. = Data not (yet) available

/ = No data because figure is not sufficiently exact

A

GENERAL BASIC DATA

A.1 Selected Basic Data on Area, Population, Economy and Finance of the Lander, 1969

	Unit	Total Federal Republic	Baden-Wurttemberg	Bavaria	Hesse	Lower Saxony	North Rhine Westphalia	Rhineland-Palatinate	Saar	Schleswig-Holstein	Total Lander	Berlin	Bremen	Hamburg
			Lander									City States		
1 Area	km²	248.571	35.750	70.550	21.110	47.412	34.039	19.837	2.568	15.675	246.940	480	404	747
2 Resident population	1.000 persons	61.195	8.910	10.569	5.423	7.100	17.130	3.671	1.127	2.557	56.487	2.134	756	1.817
2.1 in communities with less than 5.000 inhabitants	%	31,5	41,1	48,0	41,3	44,0	12,2	48,6	57,1	35,1	34,1	-	-	-
2.2 in communities with more than 200.000 inhabitants	%	25,4	13,7	19,0	21,1	13,5	31,3	-	-	20,1	19,5	100	80,2	100
3 Inhabitants per km²	persons	245	247	149	255	149	501	184	440	162	227	4.447	1.870	2.434
4 Population balance	1.000 persons	+ 572	+ 150	+ 131	+ 76	+ 35	+ 130	+ 17	- 4	+ 21	+ 557	+ 14	+ 1	+ 8
4.1 Increase/decrease per 1.000 inhabitants	persons	+ 12	+ 22	+ 16	+ 17	+ 9	+ 11	+ 7	- 1	+ 11	+ 14	- 3	+ 2	- 3
5 Tax revenue, total[1]	mill. DM	146.928 3)	22.170	21.032	14.144	11.884	40.908	6.370	1.716	4.221	122.445	6.011	5.550	14.722
5.1 per capita	DM	2.415 3)	2.513	2.005	2.629	1.682	2.401	1.741	1.520	1.658	2.181	2.815	4.700	8.095
6 Gross domestic product at current prices[2]	bill. DM	603,2	88,1	96,5	57,3	60,9	174,9	31,4	9,0	21,1	539,3	22,9	9,0	32,0
6.1 Percentage Lander	%	100	14,6	16,0	9,5	10,1	29,0	5,2	1,5	3,5	89,4	3,8	1,5	5,3
6.2 per capita	DM	9.914	9.986	9.198	10.652	8.617	10.264	8.580	7.971	8.285	9.607	10.725	11.915	17.595
7 Public expenditure (1968)[2]	mill. DM	173.312[4]	13.498	14.445	9.001	8.636	24.084	4.568	1.213	3.059	78.504	2.905	1.394	4.217
7.1 Expenditure on schools	%	7,7 4)	14,4	14,9	15,0	17,8	15,3	17,7	19,4	16,3	15,3	14,9	13,3	10,6
7.2 Expenditure on higher education	%	2,6 4)	4,9	4,2	5,3	3,4	3,3	3,5	8,2	3,8	4,1	9,5	0,2	4,3
7.3 Total educational expenditure	%	10,3 4)	19,3	19,1	18,3	21,2	18,6	21,2	27,6	20,1	19,4	24,4	13,5	14,9

1) Total revenue of federal, Lander and local taxes.
2) Preliminary figures.
3) Including amounts not payed to the Lander.
4) Including Federal Government Expenditure.

Source: Federal Statistical Office

A.2 Population by Status and Sector of Employment, Denominational and Political Structures, 1969

	Unit	Total Federal Republic	Baden-Wurttemberg	Bavaria	Hesse	Lower Saxony	North Rhine-Westphalia	Rhineland-Palatinate	Saar	Schleswig-Holstein	Berlin	Bremen	Hamburg
			Lander								City States		
1 Economically active Persons[1]	1.000	26.169	4.055	4.872	2.359	2.938	6.916	1.550	399	991	955	314	824
Self-employed	%	10,9	10,9	13,0	9,7	12,1	9,4	14,0	8,2	11,8	8,5	6,1	9,6
Unpaid family workers		7,4	7,8	11,7	6,8	10,7	4,1	12,3	5,0	6,3	1,3	/	2,4
Public servants		34,3	32,5	30,7	37,7	30,9	35,9	30,2	37,5	36,1	40,2	44.5	45,9
Employees													
Wage earners		47,4	48,8	44,6	45,8	46,3	50,6	43,5	51,3	45,8	50,0	49,4	42,1
Total		100	100	100	100	100	100	100	100	100	100	100	100
2 Sector of employment[1]													
Agriculture	%	9,8	10,4	16,0	8,3	15,2	4,7	16,4	3,0	11,8	0,6	0,0	2,0
Manufacturing		48,7	54,5	45,2	49,8	41,5	55,1	43,6	53,6	37,6	44,3	41,5	37,9
Trade and transports		17,5	13,6	16,0	17,6	18,9	17,3	15,7	20,1	21,6	19,9	31,2	30,2
Other (services)		24,0	21,5	22,8	24,3	24,4	22,9	24,3	23,3	29,0	35,2	27,3	29,9
3 Religious denomination[2]													
Catholic	%	44,1	46,8	71,3	32,1	18,8	52,1	56,2	73,4	5,6	11,4	9,9	7,4
Protestant		51,1	48,9	26,5	63,4	76,9	43,5	41,9	24,9	88,2	73,1	84,1	76,6
Others		4,8	4,3	2,2	4.5	4,3	4,4	1,3	1,7	6,2	15,5	6,0	16,0
4 Elections to Bundestag 28th Septembre, 1969, valid votes cast	1.000 votes	32.966,0	4.584,8	5.730,5	3.098,0	4.105,6	9.687,1	2.056,1	634,9	1.454,8	(1.459,0)	447.4	1.166,3
CDU	%	46,1	50,7	54,4	38,4	45,2	43,6	47,8	46,1	46,2	(32,9)	32,3	34,0
SPD		42,7	36,5	34,6	48,2	43,8	46,8	40,1	39,9	43,5	(56,9)	52,0	54,6
FDP		5,8	7,5	4,1	6,7	5,6	5,4	6,3	6,7	5,2	(7,1)	9,3	6,3
Others		5,5	5,3	7,0	6,7	5,4	4,2	5,8	7,3	5,1	(3,1)	6,4	5,1

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[1] Microcensus. - Excluding soldiers.

[2] 1961 Population census.

Source: Federal Statistical Office

A.3 Enrolments in General and Vocational Schools by Level, School-type and Lander, School-year 1969/70

A.3.1 Number

Level, branch	School-type (grades)	Total Federal Republic	Baden-Württem-berg	Bavaria	Hesse	Lower Saxony	North Rhine Westphalia	Rhineland-Palatinate	Saar	Schleswig-Holstein	Berlin	Bremen	Hamburg
			Lander								City States		
Primary	Grundschule (1 - 4)	3.604.942	547.310	708.462	297.304	386.000	935.035	231.136	71.843	146.249	127.152[1]	53.329[1]	101.118[2]
Secondary, general	Hauptschule (5 - 9)	2.422.425	343.811	475.825[3]	185.031	372.816	643.086	186.181	61.324	79.480	18.442[4]	11.875[4]	44.558[3]
	Realschule (5 - 10)	839.311	132.374	119.318[5]	81.084	131.921	258.744	34.397	10.741	49.708	15.750[5]	9.200[5]	16.076[5]
	Gymnasium (5 - 13)	1.340.254	228.653	205.699	123.216	141.877	388.358	91.534	29.906	49.730	27.570[6]	17.949[5]	35.762
	integrated comprehensive, experimental	13.759	-	-	946	-	2.385	-	-	-	5.593	150	4.685
	Abendrealschule	8.398	2.961	880	80	-	3.460	-	-	374	292	157	194
	Abendgymnasium	9.361	973	747	1.424	388	3.548	55	451	257	488	151	879
	Kolleg	5.709	251	954	769	305	2.369	544	95	74	283	-	65
Secondary, vocational	Berufsschule	1.635.864	231.244	231.980	154.992	198.214	485.255	114.367	36.642	71.750	36.057	26.423	48.940
	Berufsaufbauschule	48.489	3.700	12.504	4.923	4.935	10.556	3.800	3.128	1.857	950	573	1.563
	Fachoberschule	21.893	112	-	686	745	18.085	615	321	1.329	-	-	-
	Berufsfachschule	195.725	37.151	29.636	19.948	21.120	51.030	11.725	5.998	4.657	3.738	2.902	7.820
	Fachschule[7]	170.614	22.333	34.313	11.795	19.799	45.333	8.288	2.782	7.063	6.673	5.291	6.944
Special education (primary and secondary)	Sonderschule	293.671	44.917	34.691	23.837	32.603	99.183	11.862	6.121	14.891	11.742	4.080	9.744
Total Schools		10.678.988[8]	1.595.790	1.955.007	906.035	1.310.723	2.394.998[8]	694.504	229.357	427.419	256.730	130.077	279.348

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[1] Grades 1 - 6.
[2] Grades 1 - 6 for pupils, preparing for the Realschule.
[3] Including pupils preparing for the Realschule (grades 7 - 10).
[4] Grades 7 - 9.
[5] Grades 7 - 10.
[6] Grades 7 - 13.
[7] Including health schools and Hohere Fachschule, excepted Ingenieurschule and Hohere Wirtschaftsfachschule (see Table A.4.1).
[8] Including 68.571 enrolments in the former Volksschule in North Rhine-Westphalia.

Source: Federal Ministries of Education and Culture (Fachschule: Federal Statistical Office)

Enrolments in General and Vocational Schools
by Level, School-type and Länder, School-year 1969/70
A.3.2 Percentage*)

Level/branch	School-type (grades)	Total Federal Republic	Baden-Württemberg	Bavaria	Hesse	Lower Saxony	North Rhine-Westphalia	Rhineland-Palatinate	Saar	Schleswig-Holstein	Berlin	Bremen	Hamburg
			Länder								City States		
Primary	Grundschule (1 - 4)	33,8	34,4	38,2	32,9	29,4	31,2	33,2	31,4	34,2	49,5[1]	41,1[1]	36,3[2]
Secondary/general	Hauptschule (5 - 9)	22,7	21,5	25,7[3]	20,4	28,5	21,5	26,8	26,7	18,6	7,2[4]	9,1[4]	16,0[3]
	Realschule (5 - 10)	7,9	8,3	6,4[5]	8,9	10,1	8,0	5,0	4,7	11,6	6,1[5]	7,1[5]	5,8[5]
	Gymnasium (5 - 13)	12,6	14,3	11,1	13,6	10,8	13,0	13,2	13,0	11,6	10,7[6]	13,9[6]	12,8
	integrated comprehensive, experimental	0,1	-	-	0,1	-	0,1	-	-	-	2,2	0,1	1,7
	Abendrealschule	0,1	0,2	0,0	0,0	-	0,1	-	-	0,1	0,1	0,1	0,1
	Abendgymnasium	0,1	0,1	0,0	0,2	0,0	0,1	0,0	0,2	0,1	0,2	0,1	0,3
	Kolleg	0,1	0,0	0,1	0,1	0,0	0,1	0,1	0,0	0,0	0,1	-	0,0
Secondary/vocational	Berufsschule	15,3	14,5	12,5	17,1	15,1	16,2	16,5	16,0	16,8	14,0	20,3	17,6
	Berufsaufbauschule	0,5	0,2	0,7	0,5	0,4	0,4	0,5	1,4	0,4	0,4	0,4	0,6
	Fachoberschule	0,2	0,0	-	0,1	0,1	0,6	0,1	0,1	0,3	-	-	-
	Berufsfachschule	1,8	2,3	1,6	2,2	1,6	1,7	1,7	2,6	1,1	1,5	2,2	2,8
	Fachschule[7]	1,6	1,4	1,8	1,3	1,5	1,5	1,2	1,2	1,7	3,4	2,5	2,5
Special education (primary and secondary)	Sonderschule	2,7	2,8	1,9	2,6	2,5	3,3	1,7	2,7	3,5	4,6	3,1	3,5
Total Schools		100	100	100	100	100	100	100	100	100	100	100	100

*) Not including Abendrealschulen, Abendgymnasien and Kollegs.
[1] Grades 1 - 6.
[2] Grades 1 - 6 for pupils, preparing for the Realschule.
[3] Including pupils preparing for the Realschule (grades 7 - 10).
[4] Grades 7 - 9.
[5] Grades 7 - 10.
[6] Grades 7 - 13.
[7] Including Health Schools.

A.4 Enrolments in Post-secondary Education by Type of Institution and Lander
winter-semester 1969/70*)

A.4.1 Number

Type of Institution	Total Federal Republic	Baden-Wurttemberg	Bavaria	Hesse	Lower Saxony	North Rhine-Westphalia	Rhineland-Palatinate	Saar	Schleswig-Holstein	Berlin	Bremen	Hamburg
		Länder								City States		
University	307.550	57.486	52.022	32.325	25.074	75.854	11.013	8.107	7.903	21.702	-	16.064
Padagogische Hochschule	68.879	12.115	7.236	6.213	9.370	20.552	3.810	1.059	1.929	2.520	945	3.130
Kunsthochschule, Sporthochschule	10.075	2.273	1.496	535	719	2.755	-	194	-	958	-	1.145
Ingenieurschule	68.742	9.639	12.330	7.353	5.115	19.494	2.659	845	2.484	3.901	1.284	3.638
Hohere Wirtschaftsfachschule	7.656	437	1.408	600	217	2.899	458	222	71	888	456	-
Total Post-secondary Education	462.902	81.950	74.492	47.026	40.495	121.554	17.940	10.427	12.387	29.969	2.685	23.977

*) Not including Hohere Fachschule other than Ingenieurschule and Hohere Wirtschaftsfachschule.

Source: Federal Statistical Office and (Ingenieurschule and Hohere Wirtschaftsfachschule) Ministries of Education and Culture cont. **Enrolments in Post-secondary Education by Type of Institution and Lander**

Winter-semester 1969/70

A.4.2 Percentage

Type of Institution	Total Federal Republic	Baden-Wurttemberg	Bavaria	Hesse	Lower Saxony	North Rhine-Westphalia	Rhineland-Palatinate	Saar	Schleswig-Holstein	Berlin	Bremen	Hamburg
		Lander								City States		
University	66,4	70,1	69,8	68,8	62,0	62,4	61,4	77,7	63,8	72,4	-	67,0
Padagogische Hochschule	14,9	14,8	9,7	13,2	23,1	16,9	21,2	10,2	15,6	8,4	35,2	13,1
Kunsthochschule, Sporthochschule	2,2	2,8	2,0	1,1	1,8	2,3	-	1,9	-	3,2	-	4,7
Ingenieurschule	14,9	11,8	16,6	15,6	12,6	16,0	14,8	3,1	20,0	13,0	47,8	15,2
Hohere Wirtschaftsfachschule	1,6	0,5	1,9	1,3	0,5	2,4	2,6	2,1	0,6	3,0	17,0	-
Total Post-secondary Education	100	100	100	100	100	100	100	100	100	100	100	100

A.5 Enrolments in Institutions of Secondary and Higher Education per 1.000 Enrolments in the Grundschule by Lander, 1969/70

Type of School/Institution (grades)	Total Federal Republic	Baden-Wurttemberg	Bavaria	Hesse	Lower Saxony	North*) Rhine-Westphalia	Rhineland-Palatinate	Saar	Schleswig-Holstein	Berlin	Bremen	Hamburg
		Lander								City States		
Grundschule (1 - 4)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000 1)	1.000 1)	1.000 2)
Hauptschule (5 - 9)	672	628	672 3)	622	966	688	806	854	543	145 4)	223 4)	441 3)
Realschule and Gymnasium (5 - 13)	605	660	459 5)	687	709	671	545	566	680	341 5)	509 5)	513 5)
Abendrealschule, Abendgymnasium, Kolleg	7	8	4	8	2	10	3	8	5	8	6	11
Berufsschule	454	423	327	521	514	519	495	510	491	284	495	484
Berufsaufbauschule and Fachoberschule	20	7	18	19	15	31	19	48	22	7	11	15
Berufsfachschulen and Fachschule	102	109	90	107	106	103	87	122	80	98	116	146
Sonderschule	81	82	49	80	84	106	51	85	102	92	77	96
Universitat and Padagogische Hochschule	104	127	83	130	89	103	64	128	67	190	18	190
Kunsthochschule, Sporthochschule	3	4	2	2	2	3	-	3	-	8	-	11
Ingenieurschule and Hohere Wirtschaftsfachschule	21	18	19	27	14	24	13	15	17	38	53	36

*) Not including 68.571 enrolments in the former Volksschule in North Rhine-Westphalia.

1) Grades 1 - 6.
2) Grades 1 - 6 for pupils preparing for the Realschule.
3) Including pupils preparing for the Realschule.
4) Grades 7 - 9.
5) Realschule: grades 7 - 10; Berlin and Bremen Gymnasium grades 7 - 10.

A.6 Public Expenditure on Education and Culture in Relation to Gross National Product*) and Total Expenditure

	1963	1968	Increase Decrease 1963 - 1968
	Mill. DM		
Gross National Product (GNP)	384.000,0	538.500,0	+ 40,2 %
Total public expenditure	122.104,4	173.522,4	+ 42,1 %
thereof			
Schools	8.237,9	13.098,9	+ 59,0 %
Post-secondary education[1)]	2.371,2	4.467,3	+ 88,4 %
Other science and research	1.102,4	2.199,1	+ 99,5 %
Cultural affairs[2)]	1.341,1	1.624,6	+ 21,1 %
Total education and culture	13.052,6	21.389,9	+ 63,9 %

Percentage	1963		1968		Increase Decrease 1963 - 1968	
	GNP	Tot.Exp.	GNP	Tot.Exp.	GNP	Tot.Exp.
Schools	2,15	6,75	2,43	7,55	+0,28	+ 0,80
Post-secondary education	0,61	1,94	0,83	2,57	+0,22	+ 0,63
Other science and research	0,29	0,90	0,41	1,27	+0,12	+ 0,37
Cultural affairs	0,35	1,10	0,30	0,94	-0,05	- 0,16
Total education and culture	3,40	10,69	3,97	12,33	+0,57	+ 1,64

*) At current prices.

1) Including university clinics.
2) Including further education.

Source: Federal Statistical Office

A.7 Public Expenditure on Education and Culture by Administrative Level

	1963	1968	Increase Decrease 1963 - 1968
Schools, total	8.237,9	13.098,9	+ 59,0 %
thereof %			
Central Government	1,0	1,5	+ 0,5
Länder	59,4	64,5	+ 5,1
Communities	39,6	34,0	- 5,6
Post-secondary, total[1)]	2.371,2	4.467,3	+ 88,4 %
thereof %			
Central Government	14,7	18,2	+ 3,5
Länder	85,3	81,8	- 3,5
Communities	0,0	0,0	±
Other science and research	1.102,4	2.199,1	+ 99,5 %
thereof %			
Central Government	56,4	64,3	+ 7,9
Länder	37,1	31,8	- 5,3
Communities	6,5	3,8	- 2,7
Cultural affairs[2)], total	1.341,1	1.624,6	+ 21,1 %
thereof %			
Central Government	5,5	4,8	- 0,7
Länder	47,4	45,3	- 1,9
Communities	47,1	49,9	+ 1,8
Total education and culture	13.052,6	21.389,9	+ 63,9 %
thereof %			
Central Government	8,6	11,7	+ 3,1
Länder	61,0	63,3	+ 2,3
Communities	30,4	25,0	- 4,6

1) Including university clinics.
2) Including further education.

Source: Federal Statistical Office.

A.8 Total Resident Population by Educational Background*)

Age Group from .. to under .. years	Persons with completed training at					
	Berufsfachschule and Fachschule[1]			university and other post-secondary institutions		
	M	F	M + F	M + F	F	M
	Percentage[2]					
15 - 25	2,8	5,9	4,3	0,3	0,4	0,2
25 - 30	6,6	5,1	5,9	2,4	1,6	3,1
30 - 35	7,5	4,4	6,0	3,2	1,8	4,6
35 - 40	7,8	4,7	6,0	3,2	1,9	4,9
40 - 45	7,0	3,7	5,1	2,9	1,4	5,0
45 - 50	6,2	3,1	4,4	2,6	1,1	4,5
50 - 55	5,9	2,5	4,0	2,5	1,0	4,4
55 - 60	5,0	2,1	3,4	2,3	0,8	4,1
60 - 65	3,7	1,5	2,4	2,4	0,9	4,4
65 - 70	2,3	1,0	1,5	1,9	0,8	3,8
75 and over	1,5	0,5	0,9	1,6	0,5	3,1
Total 15 and over	5,0	3,4	4,1	2,1	1,0	3,3

*) Population Census 1961

[1] Including Höhere Fachschule.

[2] Of total age group.

Source: Federal Statistical Office

B

SELECTED DATA
BY LEVEL AND BRANCH OF EDUCATION

B.1 Pre-primary Education

B.1.1 Kindergarten

	1959	1969	Increase 1959 - 1969
Institutions, total	11.919	16.413	+ 4.494
% private	.	79	.
Places for children, total	784.660	1.104.452	+ 40,8 %
% in private institutions	.	80	.
Age group 3 - 5	2.419.000	3.081.100	+ 27,4 %
Places per 100 children of age group 3 - 5	32	36	+ 4

Source: Federal Statistical Office

B.1.2 Schulkindergarten

	1959	1969	Increase 1959 - 1969
Institutions, total	245	1.023	+ 778
Children, total	5.626	22.190	+ 273,5 %
% girls	42,0	42,9	+ 0,9
New entrants in 1st class of primary education, total	777.566	1.061.807	+ 36,6 %
% girls	48,7	49,2[1)]	+ 0,5
Children exempted from schooling, total*)	58.300	79.600	+ 36,5 %
% in Schulkindergarten	9,7	27,9	+ 18,2

*) Assumption: 7,5 % (same as 1963 and 1966).

1) Not including Lower Saxony and Berlin.

Source: Federal Statistical Office

B.2 Primary and Secondary General Education

B.2.1 Enrolments*)

School-type (grouped according to the availability of data on classes and teachers)	1959	1969	Increase 1959 - 1969
Grundschule	2.908.989	3.374.862	+ 16,0 %
Hauptschule (thereof grade 9)	1.810.139 (22.787)	2.363.115 (342.738)	+ 30,5 %
Grundschule and Hauptschule	4.719.128	5.737.977	+ 21,6 %
Realschule	382.230	795.656	+ 108,2 %
Gymnasium, grades 5 - 10	608.248	986.221	+ 62,1 %
Gymnasium, grades 11 - 13	184.265	276.714	+ 50,2 %
Gymnasium, grades 5 - 13	792.513	1.262.935	+ 59,4 %
Sonderschule	113.237	268.105	+ 136,8 %
Total	6.007.108	8.064.673	+ 34,3 %

*) Not including City States (Berlin, Bremen, Hamburg).

Source: Federal Statistical Office

cont. Primary and Secondary General Education

B.2.2 Classes and Teachers*)

School-type (grouped according to the availability of data on classes and teachers)	1959	1969	Increase 1959 - 1969
Classes			
Grundschule and Hauptschule	130.107	166.438	+ 27,9 %
Realschule	11.594	24.124	+ 108,1 %
Gymnasium, grades 5 - 13	27.255	43.798	+ 60,7 %
Sonderschule	5.199	15.356	+ 195,4 %
Total	174.155	249.716	+ 43,4 %
Full-time Teachers			
Grundschule and Hauptschule	129.245	167.461	+ 29,6 %
Realschule	13.002	29.489	+ 126,8 %
Gymnasium, grades 5 - 13	40.608	60.448	+ 48,9 %
Sonderschule	4.670	14.811	+ 217,2 %
Total	187.525	272.209	+ 45,2 %

*) Not including City States.

Source: Federal Statistical Office

cont. Primary and Secondary General Education
B.2.3 Pupils/Teachers per Class*)

School-type (grouped according to the availability of data on classes and teachers)	1959	1969
Pupils per Class		
Grundschule and Hauptschule	36,3	34,4
Realschule	33,0	33,0
Gymnasium, grades 5 - 13	29,1	28,8
Sonderschule	21,8	17,5
Average	34,5	32,1
Full-time Teachers per Class		
Grundschule and Hauptschule	1,0	1,0
Realschule	1,1	1,2
Gymnasium, grades 5 - 13	1,5	1,4
Sonderschule	0,9	1,0
Average	1,1	1,1

*) Not including City States.

Source: Federal Statistical Office

cont. Primary and Secondary General Education
B.2.4 Female Pupils*)

School-type	1959		1969	
	Number	%	%	Number
Grundschule	1.415.441	48,7	48,7(1967)	
Hauptschule	908.093	50,2	49,4	1.167.499
Realschule	200.083	52,3	52,7	419.608
Gymnasium, grades 5 - 10	248.967	40,9	44,2	435.689
Gymnasium, grades 11 - 13	65.476	35,5	38,9(1967)	.
Sonderschule	42.323	37,4	43,8	117.553
Total	2.880.383	47,9	.	.

*) Not including City States.

Source: Federal Statistical Office

cont. Primary and Secondary General Education
B.2.5 Rates of Transition from Primary to Secondary Education by Monthly Income of Father, Baden-Württemberg, 1968

	Total leaving Grundschule	thereof entering		
		Hauptschule	Realschule	Gymnasium
	%			
- 600 DM	100	79,9	12,5	7,6
600 - 799 DM	100	75,4	15,9	8,7
800 - 999 DM	100	73,2	14,7	12,1
1.000 - 1.249 DM	100	59,9	15,3	24,8
1.250 - 1.499 DM	100	45,7	20,6	33,7
1.500 - 1.999 DM	100	34,9	13,7	51,4
2.000 -	100	28,4	4,8	66,8

Sample: 1.508 interviews with parents of new entrants into secondary general education at the beginning of school year 1967/68.

Source: Study prepared for publication by the end of 1971 of Work Group for Empirical Educational Research, Heidelberg,

cont. Primary and Secondary General Education

B.2.6 Part-time teaching

School-type (grouped according to the availability of data on teachers)	Number of part-time teachers		Part-time teaching hours per week		Teaching hours per teacher		Part-time teachers in full-time equivalent		Total teaching staff		Percentage part-time teachers	
	1966	1969	1966	1969	1966	1969	1966	1969	1966	1969	1966	1969
Grundschule and Hauptschule	39.963	56.000	307.424	365.444	13,0	15,3	10.379	12.410	176.358	192.556	5,9	6,4
Realschule	7.805	14.344	54.570	87.108	14,3	16,5	2.001	3.186	26.271	35.059	7,6	9,1
Gymnasium, grades 5 - 13	12.392	31.810	99.435	179.833	12,5	17,7	4.021	7.297	57.564	72.652	7,0	10,0
Sonderschule	2.927	5.444	22.055	35.938	13,3	15,1	782	1.274	11.955	18.096	6,5	7,0
Total/average	63.087	107.598	483.484	668.323	13,0	16,1	17.183	24.167	272.148	318.363	6,3	7,6

Source: Ministries of Education and Culture

cont. Primary and Secondary General Education

B.2.7 Public Expenditure on General Education Related to Gross National Product (GNP)

	1963	1968	Increase 1963 - 1968
Total public expenditure on general education (1.000 DM)	6.505.680	10.359.892	+ 59,2 %
thereof			
Grundschule, Hauptschule, Sonderschule	4.548.314	6.728.310	+ 47,9 %
Realschule, Abendrealschule,	529.218	1.111.295	+ 110,0 %
Gymnasium (grades 5 - 13), Abendgymnasium, Kolleg	1.428.148	2.520.287	+ 76,5 %
Gross National Product (1.000 DM) 1)	384.000.000	538.900.000	+ 40,3 %
thereof			
Grundschule, Hauptschule, Sonderschule	11,8 ‰	12,5 ‰	+ 0,7
Realschule, Abendrealschule	1,4 ‰	2,1 ‰	+ 0,7
Gymnasium (grades 5 - 13), Abendgymnasium, Kolleg	3,7 ‰	4,7 ‰	+ 1

1) At current prices.

Source: Federal Statistical Office

cont. Primary and Secondary General Education

B.2.8 **Total Expenditure per Pupil**

	1963	1968	Increase 1963 - 1968
	DM per year		
Grundschule, Hauptschule, Sonderschule	812	1.097	+ 35
Realschule, Abendrealschule	1.065	1.424	+ 34
Gymnasium (grades 5 - 13), Abendgymnasium, Kolleg	1.637	1.965	+ 20
	Gymnasium = 100		
Grundschule, Hauptschule, Sonderschule	50	56	+ 6
Realschule, Abendrealschule	65	72	+ 7
Gymnasium (grades 5 - 13), Abendgymnasium, Kolleg	100	100	---

Source: Ministries of Education and Culture (enrolments) and Federal Statistical Office

cont. Primary and Secondary General Education

B.2.9 Personal Expenditure*)

	1963	1967	Increase 1963 - 1967
	1.000 DM		
Grundschule, Hauptschule, Sonderschule	2.531.193	3.866.527	+ 52,8 %
Realschule, Abendrealschule	312.992	550.183	+ 75,8 %
Gymnasium (grades 5 - 13), Abendgymnasium, Kolleg	940.234	1.440.537	+ 53,2 %
	DM per Teacher/year		
Grundschule, Hauptschule, Sonderschule	15.242	19.727	+ 4.485
Realschule, Abendrealschule	14.589	18.744	+ 4.155
Gymnasium (grades 5 - 13), Abendgymnasium, Kolleg	18.495	23.136	+ 4.641
	Gymnasium = 100		
Grundschule, Hauptschule, Sonderschule	82	85	+ 3
Realschule, Abendrealschule	79	81	+ 2
Gymnasium (grades 5 - 13), Abendgymnasium, Kolleg	100	100	---

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*) Full-time teachers including part-time teachers in full-time equivalent.

Source: Ministries of Education and Culture (teachers) and Federal Statistical Office

cont. Primary and Secondary General Education

B.2.10 Teachers' Salaries*)

B.2.10.1 DM per Month

	1961	1965	1970
Grundschule, Hauptschule (A 11 a)			
Final basic salary	1.051,55	1.312,--	1.736,70
including allowances for married teachers			
a) without children	1.208,55	1.532,--	2.024,70
b) with 2 children	1.256,55	1.587,--	2.211,70
Realschule (A 12)			
Final basic salary	1.097,78	1.378,--	1.839,30
including allowances for married teachers			
a) without children	1.254,78	1.598,--	2.217,30
b) with 2 children	1.302,78	1.653,--	2.314,30
Gymnasium (A 13/13 a)[1]			
Final basic salary	1.398,29	1.678,--	2.178,40
including allowances for married teachers	1.590,29	1.946,--	2.514,40
a) without children	1.590,29	1.946,--	2.514,40
b) with 2 children	1.638,29	2.001,--	2.701,40
Sonderschule (A 12 a)			
Final basic salary	1.115,11	1.527,--	1.943,--
including allowances for married teachers			
a) without children	1.307,11	1.747,--	2.231,--
b) with 2 children	1.355,11	1.802,--	2.418,--

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*) Land of Hesse. - Not including teachers with special functions, e.g. directors, vice-directors.

For further foot-notes see following table.

cont. Primary and Secondary General Education

B.2.10.2 1961 = 100

	1965	1970
Grundschule, Hauptschule (A 11 a)		
Final basic salary	124,8	165,2
including allowances for married teachers		
a) without children	126,8	167,5
b) with 2 children	126,3	176,0
Realschule (A 12)		
Final basic salary	125,5	167,5
including allowances for married teachers		
a) without children	127,4	176,7
b) with 2 children	126,9	177,6
Gymnasium (A 13/13 a)1)		
Final basic salary	120,0	155,8
including allowances for married teachers		
a) without children	122,4	158,1
b) with 2 children	122,1	164,9
Sonderschule (A 12 a)		
Final basic salary	136,9	174,2
including allowances for married teachers		
a) without children	133,7	170,7
b) with 2 children	133,0	178,4

1) In 1970 about 50 % of normal Gymnasium teachers were salaried according to A 14: final basic salary = 2.309,10 DM, including allowances a) 2.645,10 DM; b) 2.832,10 DM.

Source: Government of Hesse

cont. Primary and Secondary General Education

B.2.11 Capital Expenditure per School

	Unit	1963	1967	Increase 1963 - 1967
Grundschule, Hauptschule, Sonderschule	1.000 DM	580.134	1.714.425	+ 195,5 %
Realschule[1]		165.137	347.624	+ 110,5 %
Gymnasium (grades 5 - 13)[1]		304.090	534.084	+ 75,6 %
Total capital expenditure		1.049.361	2.596.133	+ 147,4 %
General education schools	institutions	35.421	35.504	+ 0,2 %
Expenditure per hool/year	DM	29.625,-	73.122,-	+ 146,8 %

1) Including evening schools; Gymnasium further including Kolleg.
2) Not including administration.

Source: Federal Statistical Office

B.3 Secondary General Education - Grades 5 - 10

B.3.1 Enrolments by School-type*)

School-type	1959	1969	Increase Decrease 1959 - 1969
	Number		
Hauptschule1)	1.787.352	2.020.377	+ 13,0 %
Realschule and Gymnasium, grades 5-10	990.478	1.781.877	+ 79,9 %
(Realschule)	(382.230)	(795.656)	(+ 108,2 %)
(Gymnasium, grades 5 - 10)	(608.248)	(986.221)	(+ 62,1 %)
Total	2.777.830	3.802.254	+ 36,9 %
	Percentage		
Hauptschule1)	64,3	53,1	- 11,2
Realschule and Gymnasium, grades 5-10	35,7	46,9	+ 11,2
(Realschule)	(13,8)	(20,9)	(+ 7,1)
(Gymnasium, grades 5 - 10)	(21,9)	(26,0)	(+ 4,1)
Total	100	100	-

*) Not including City States.

1) For comparison grades 5 to 8 (grade 9 having been introduced only in the sixties).

Source: Federal Statistical Office

cont. Secondary General Education - Grades 5 - 10

B.3.2 Total Enrolments in Entrance Classes (Grade 5)*)

School-type	1959	1969	Increase / Decrease 1959 - 1969
	Number		
Hauptschule	562.118	588.033	+ 4,6 %
Realschule and Gymnasium, grades 5-10	185.727	344.744	+ 85,6 %
(Realschule)	(66.759)	(138.549)	(+ 107,5 %)
(Gymnasium, grades 5 - 10)	(118.968)	(206.195)	(+ 73,3 %)
Total	747.845	932.777	+ 24,7 %
	Percentage		
Hauptschule	75,2	63,0	- 12,2
Realschule and Gymnasium, grades 5-10	24,8	37,0	+ 12,2
(Realschule)	(8,9)	(14,9)	(+ 6,0)
(Gymnasium, grades 5 - 10)	(15,9)	(22,1)	(+ 6,2)
Total	100	100	-

*) Not including City States.

Source: Federal Statistical Office

cont. Secondary General Education - Grades 5 - 10

B.3.3 Female Pupils in Entrance Classes (Grade 5)*)

School-type	1959	1969	Increase Decrease 1959 - 1969
	Number		
Hauptschule	276.914	287.335	+ 3,8 %
Realschule and Gymnasium, grades 5-10	80.690	163.448	+ 102,6 %
(Realschule)	(33.552)	(72.976)	(+ 117,5 %)
(Gymnasium, grades 5 - 10)	(47.138)	(90.472)	(+ 91,9 %)
Total	357.604	450.783	+ 26,0 %
	Percentage		
Hauptschule	49,3	48,9	- 0,4
Realschule and Gymnasium, grades 5-10	43,4	47,4	+ 4,0
(Realschule)	(50,3)	(52,7)	(+ 2,4)
(Gymnasium, grades 5 - 10)	(39,6)	(43,9)	(+ 4,3)
Total	47,8	48,3	+ 0,5

*) Not including City States.

Source: Federal Statistical Office

cont. Secondary General Education - Grades 5 - 10

B.3.4 Female Pupils in Leaving Classes (Grade 10)*)

School-type	1959	1969	Increase Decrease 1959 - 1969
	Number		
Realschule and Gymnasium, grades 5 - 10	75.159	113.346	+ 50,8 %
(Realschule)	(34.392)	(57.461)	(+ 67,1 %)
(Gymnasium, grades 5 - 10)	(40.767)	(55.885)	(+ 37,1 %)
	Percentage		
Realschule and Gymnasium, grades 5 - 10	47,2	48,3	+ 1,1
(Realschule)	(54,8)	(52,8)	(- 2,0)
(Gymnasium, grades 5 - 10)	(42,2)	(44,3)	(+ 2,1)

*) Not including City States.

Source: Federal Statistical Office

cont. Secondary General Education - Grades 5 - 10

B.3.5 Transition Rates and Leaving Certificates after Grade 10*)

	1955 - 1959		1964 - 1967[1]	
	Transition Period			
Enrolments grade 7	1955		1964	
Realschule		64.795		98.843
Gymnasium, grades 5 - 10		124.402		116.257
Total		189.197		215.100
Leaving certificates after grade 10	1959		1967	
Realschule		59.961		77.703
Gymnasium, grades 5 - 10		88.625[2]		98.324[3]
Total		148.586		176.027
Transition rate	1955-59	78,5 %	1964-67	81,8 %
Percentage of age group[4]	1959	17,9	1967	22,1

*) Not including City States.

1) 3-year-course (Bavaria 4 years) because of the transfer of beginning of school-year from spring to autumn.

2) Enrolments grade 10/1958 less 7 % failure.

3) Enrolments grade 9/1967 (Bavaria 10/1968) less 8 % failure.

4) Leaving certificates as percentage of age group 16 - 18 of total population.

Source: Federal Statistical Office

cont. Secondary General Education - Grades 5 - 10

B.3.6 Failure Rates*) in Grades 10 of Gymnasium**)

	1961	1965	1967
Total			
Enrolments grade 10	72.953	93.557	104.619
thereof failure	6.983	7.709	10.538
Failure rate	9,6 %	8,2 %	10,1 %
Male			
Enrolments grade 10	43.386	54.650	61.029
thereof failure	4.795	5.657	6.964
Failure rate	11,1 %	10,4 %	11,4 %
Female			
Enrolments grade 10	29.567	38.907	43.590
thereof failure	2.188	2.052	3.574
Failure rate	7,4 %	5,3 %	8,2 %

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*) Grade 10 pupils not being promoted into grade 11.
**) Not including City States.

Source: Federal Statistical Office

B.4 Secondary General Education - Gymnasium, Grades 11 - 13

B.4.1 Enrolments by Sex, Denomination Type of Gymnasium, Regional and Social Background, North Rhine-Westphalia, Sample 1968*)

Characteristics (Responses to question)	Male	Female
	Percentage of Responses	
1. Sex (2.517)	63,2	36,8
2. Denomination (2.517)		
Catholic	34,1	19,6
Protestant	25,8	16,3
other	2,5	0,7
3. Type of Gymnasium (2.517)		
Classical	29,6	-
Modern languages	41,8	48,7
Mathematics-sciences	28,6	-
Women's professions	-	41,3
4. Regional background (2.517)		
City	61,2	38,8
Rural	65,4	34,6
5. Social background (2.382)1)		
Status and vocation of father:		
university graduate	19,6	21,7
other educational background	80,4	78,3
thereof:		
employee below managerial level	26,4	24,2
wage earner	22,3	15,3
public servant	16,3	18,7
liberal profession	8,4	9,9
manager	4,1	5,8
farmer	2,9	4,4

*) N ≙ 2.517 students of grades 11 - 13 of selected gymnasia.

1) Not including students whose fathers had died (67) or retired from active life (35). Further not including students without response (33).

Source: Josef Hitpass, Bildungsboom, Bertelsmann Universitätsverlag, Bielefeld 1970

cont. Secondary General Education - Gymnasium, Grades 11 - 13

B.4.2 Educational Background of Parents, Sample 1959*)

	Fathers	Mothers
	General Education 1)	
Upper primary	23,7	33,5
Realschule and Gymnasium without Abitur	23,7	47,9
Gymnasium with Abitur	52,6	18,6
Total	100 R = 1.103	100 R = 1.091
	Vocational and Post-secondary Education	
Apprenticeship	23,1	17,2
Fachschule with certificate	27,1	20,4
University graduate	40,0	6,7
University drop out	0,8	3,1
Other 2)	9,0	52,6
Total	100 N = 1.113	100 N = 1.113

*) Sample: 50 schools in 8 Länder (not including City States) with 1.113 grade-13-students interviewed in 1959.

1) Not including "no response" (fathers = 10; mothers = 22).
2) Including drop-outs of other than university and "no response".

Source: Erika Spiegel/Rudolf Gunzert, Elternhaus und Studium, 2. Teil; edited by Institut für Sozialforschung, Frankfurt/M. 1963

cont. B.4.2 Educational Background of Parents,
North Rhine-Westphalia, Sample 1968*)

	Fathers	Mothers	Both Fathers and Mothers
General Education			
Upper primary	47,0	49,2	36,0
Realschule 1)	16,2	31,3	5,2
Gymnasium	36,8	19,5	9,1
University			
Total	17,5	6,7	4,8

*) N = 2.517 students of grades 11 - 13 of selected gymnasia.

1) Including Handelsschule.

Source: Josef Hitpass/Albert Mock, Studenteneskalation, Bielefeld 1969

cont. Secondary General Education - Gymnasium, Grades 11 - 13

B.4.3 Transition Rates and Leavers with Certificate as Percentage of Age Group

	1959	1969	Increase Decrease 1959 - 1969
Total			
Leavers with certificate (Abitur)	45.507	71.300	+ 56,7 %
Enrolments grade 11(2 years ago)	64.986	90.594	+ 39,4 %
Transition rate	70,0	78,7	+ 8,7
Leavers in % of age group	5,0	9,3	+ 4,3
Male			
Leavers with certificate (Abitur)	29.592	43.331	+ 46,4 %
Percentage of total	65,0	60,8	- 6,5 %
Enrolments grade 11(2 years ago)	41.890	55.627	+ 32,8 %
Transition rate	70,6	77,9	+ 7,3
Leavers in % of age group	6,3	11,0	+ 4,7
Female			
Leavers with certificate (Abitur)	15.915	27.969	+ 75,7 %
Percentage of total	35,0	39,2	+ 12,0 %
Enrolments grade 11(2 years ago)	23.096	34.967	+ 51,4 %
Transition rate	68,9	80,0	+ 11,1
Leavers in % of age group	3,5	7,4	+ 3,9

Source: Federal Statistical Office

cont. Secondary General Education - Gymnasium, Grades 11 - 13

B.4.4 Leaving Examination Failure Rates

	1963	1969
Total		
Participants in examination	55.977	74.369
thereof failure	2.652	3.069
Failure rate	4,7	4,1
Male		
Participants in examination	35.877	45.648
thereof failure	2.109	2.317
Failure rate	5,9	5,1
Female		
Participants in examination	20.100	28.721
thereof failure	543	752
Failure rate	2,7	2,6

Source: Federal Statistical Office

cont. Secondary General Education - Gymnasium, Grades 11 - 13

B.4.5 Leavers with Certificate by Age

Age Group	1960			1969		
	male	female	total	male	female	total
18	79	63	142	3.156	2.864	6.020
19	6.699	5.018	11.717	13.280	11.109	24.389
20	11.786	7.031	18.817	11.299	6.075	17.374
21	6.015	1.995	8.010	5.232	1.521	6.753
22	1.943	336	2.279	1.488	243	1.731
23	486	61	547	326	43	369
24	255	57	312	198	38	236
Total	27.263	14.561	41.824	34.979	21.893	56.872
Average age	20,2	19,9	20,1	19,7	19,3	19,6

Source: Federal Statistical Office

cont. Secondary General Education - Gymnasium, Grades 11 - 13

B.4.6 Leavers with Certificate by Choice of Career, Rhineland Palatinate

	1963	1970
Leavers, total (= 100)	3.166	5.691
thereof		
Academic Career	87,6 %	84,3 %
- Teachers	42,5 %	36,4 %
- Other Academic	45,1 %	47,9 %
b) Non-academic Career*)	12,4 %	15,7 %

*) Including "no response".

Source: Statistical Office of Rhineland Palatinate

B.5 Evening Schools and other Secondary General Schools for Adults

Institutions, Enrolments, Certificates

	1959	1969
Abendrealschule		
Institutions	8	91
Enrolments, total	1.902	8.396
thereof % female	10,7	23,5
Leaving certificates, total	378	1.531
thereof % female	10,3	24,6
Abendgymnasium		
Institutions	32	42
Enrolments, total	5.415	9.361
thereof % female	16,2	23,6
Leaving certificates	674	1.302
thereof % female	20,0	20,2
Kolleg		
Institutions	3	28
Enrolments, total	163	5.709
thereof % female	14,7	14,9
Leaving certificates	42	1.354
thereof % female	9,5	15,5
Total		
Institutions	43	161
Enrolments, total	7.480	23.466
thereof % female	14,8	21,4
Leaving certificates	1.094	4.187
thereof % female	16,3	20,3

Source: Federal Statistical Office

B.6 Vocational Education and Training

B.6.1 Enrolments

	1961	1969	Increase Decrease 1961 - 1969
Berufsschule (part-time within the dual system)	1.638.671	1.635.864	- 0,2 %
Berufsaufbauschule	42.298	48.489	+ 14,6 %
Fachoberschule[1)]	-	21.903	. %
Berufsfachschule	128.805	195.725	+ 52,0 %
Fachschule[2)]	98.936	103.722	+ 4,8 %
Total	1.908.710	2.005.703	+ 5,1 %

1) Being set up since 1969.
2) Without schools not under ther responsibility of Ministers of Education and Culture, e.g. medical schools. Including Höhere Fachschule.

Source: Ministries of Education and Culture

cont. Vocational Education and Training

B.6.2 Classes and Teachers

	1961	1969	Increase Decrease 1961 - 1969
Classes			
Berufsschule (part-time within the dual system)	71.331	71.009	- 0,5 %
Berufsaufbauschule	1.821	2.196	+ 20,6 %
Berufsfachschule	5.421	8.041	+ 48,3 %
Fachoberschule[1)]	-	869	. %
Fachschule[2)]	4.649	4.716	+ 1,4 %
Total	83.222	86.831	+ 4,3 %
Teachers			
Berufsschule (part-time within the dual system)	25.400	27.900	+ 9,8 %
Berufsaufbauschule	426	1.225	+ 187,6 %
Berufsfachschule	7.300	11.630	+ 59,3 %
Fachoberschule[1)]	-	.	. %
Fachschule[2)]	7.109	7.729	+ 8,7 %
Total	40.235	48.484	+ 20,5 %

1) Being set up since 1969.
2) Without schools not under the responsibility of Ministers of Education and Culture, e.g. medical schools. Including Höhere Fachschule.

Source: Ministries of Education and Culture

cont. Vocational Education and Training

B.6.3 Students/Teachers per Class

	1961	1969	Increase Decrease 1961 - 1969
Students per Class			
Berufsschule (part-time within the dual system)	23,0	23,0	±
Berufsaufbauschule	23,2	22,1	- 1,1
Berufsfachschule	23,8	24,3	+ 0,5
Fachoberschule1)	-	25,2	.
Fachschule2)	21,3	22,0	+ 0,7
Teachers per Class			
Berufsschule (part-time within the dual system)	0,4	0,4	±
Berufsaufbauschule	.	.	.
Berufsfachschule	1,3	1,4	+ 0,1
Fachoberschule1)	-	.	.
Fachschule2)	1,5	1,6	+ 0,1

1) Being set up since 1969.
2) Without schools not under the responsibility of Ministers of Education, e.g. medical schools. Including Höhere Fachschule.

Source: Ministries of Education and Culture

cont. Vocational Education and Training

B.6.4 Female and Foreign Students

	1959		1968	
	Number	%		Number
Female				
Berufsschule (part-time within the dual system)	808.396	44,2	44,1	773.338
Berufsaufbauschule	2.019	3,9	13,1	7.868
Berufsfachschule und Fachschule[1]	172.393	61,8	61,9	212.998
Technikerschule	895	4,7	5,0	1.350
Total	983.703	45,1	45,5	995.554
Foreign				
Fachschule[1]	1.578	1,2	4,0	5.569
Technikerschule	166	0,9	5,2	1.406
Total	1.744	1,2	4,2	6.975

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1) Not including Technikerschule.

Source: Federal Statistical Office

cont. Vocational Education and Training

B.6.5 Part-time Teaching

	Number of part-time teachers		Part-time teaching hours per week		Teaching hours per teacher		Part-time teachers in full-time equivalent		Total teaching staff		Percentage part-time teachers	
	1966	1969	1966	1969	1966	1969	1966	1969	1966	1969	1966	1969
Berufsschule (part-time within the dual system)	15.946	18.901	91.764	87.830	5,8	4,6	3.398	3.288	27.762	27.900	12,2	11,8
Berufsfachschule	7.081	10.909	39.582	56.849	5,6	5,2	1.485	2.134	9.617	11.630	15.4	18,3
Fachschule[1)]	7.225	8.368	36.164	39.597	5,0	4,7	1.371	1.532	7.272	7.729	18,9	19,8
Total/average	30.252	38.178	167.510	184.276	5,5	4,8	6.254	6.954	44.651	47.259	14,0	14,7

1) Without schools not under the responsibility of Ministries of Education and Culture.

Source: Ministries of Education and Culture

cont. Vocational Education and Training

B.6.6 Vocational Training in Undertakings within the Dual System

B.6.6.1 Apprentices and Trainees by Field of Training

Field of Training	1969			
	M	F*)		M + F
Industry and Commerce	407.146	307.479	43 %	714.625
Handicrafts	342.799	92.207	21,2 %	435.006
Agriculture	34.480	11.386	24,8 %	45.866
Mining	-	-	-	-
Federal Railway and Postal Administration	22.901	1	0,0 %	22.902
Physicians and Dentists	-	29.878	100 %	29.878
Pharmacists	-	8.726	100 %	8.726
Lawyers and Notaries	1.120	13.374	92,3 %	14.494
Other Fields	4.849	7.108	59,4 %	11.957
Total 1969	813.295	470.159	36,6 %	1.283.454
whereas 1959**)	843.414	461.893	35,4 %	1.305.307
Index (1959 = 100)	96,4	101,8	.	98,3

*) Percentage related to M + F = 100.

**) Not including Berlin.

Source: Federal Ministry of Labor and Social Affairs

cont. Vocational Education and Training

B.6.6.2 Apprentices and Trainees by Type of Training

Field of Training	Apprentices		Trainees	
	M + F	% F	% F	M + F
Industry and Commerce	678.922	40,6	88,7	35.703
Handicrafts	433.314	21,0	96,8	1.692
Agriculture	45.866	24,8	-	-
Mining	-	-	-	-
Federal Railway and Postal Administration	22.902	0,0	-	-
Physicians and Dentists	29.878	100	-	-
Pharmacists	-	-	100	8.726
Lawyers and Notaries	14.494	92,3	-	-
Other Fields	11.957	59,4	-	-
Total 1969	1.237.333	34,6	91,2	46.121
whereas 1959	1.262.278	33,7	86,2	43.029
Index (1959 = 100)	98,0			107,2

cont. Vocational Education and Training
B.6.6.3 Percentage Apprentices and Trainees of Selected Population Groups

	1962	1969
Resident population - age group 15 - 19 (1.000)	3.533	3.994 (1968)
thereof apprentices and trainees	34,7 %	34,9 %
Economically active persons (1.000)	26.783	26.822
thereof apprentices and trainees	4,6 %	4,8 %
Employees (1.000)	6.463	7.560
thereof apprentices and trainees	8,4 %	7,2 %
Wage earners (1.000)	12.927	12.448
thereof apprentices and trainees	5,3 %	5,9 %

Source: Federal Ministry of Labor and Social Affairs

cont. Vocational Education and Training

B.6.6.4 Apprentices and Trainees by Length of Training Course

B.6.6.4.1 Apprentices

1 a) Number

		1964			1969		
		Total	Length of Course		Total	Length of Course	
			2 - 3	3 1/2 and more		2 - 3	3 1/2 and more
			years			years	
Chambers of Industry and Commerce	M	406.412	263.795	142.617	403.122	258.351	144.771
	F	299.328	291.835	7.493	275.800	267.155	8.645
Chambers of Handicrafts	M	351.999	226.926	125.073	342.745	164.172	178.573
	F	98.782	96.108	2.674	90.569	87.280	3.289
Chambers of Agriculture	M	25.897	1.194	24.703	34.480	34.480	-
	F	11.380	267	11.113	11.386	11.386	-
Other	M	40.418	20.635	19.783	28.870	12.113	16.757
	F	19.808	19.808	-	50.361	50.361	-
Total	M	824.726	512.550	312.176	809.217	469.116	340.101
	F	429.298	408.018	21.280	428.116	416.182	11.934

cont. Vocational Education and Training

B.6.6.4 Apprentices and Trainees by Length of Training Course

B.6.6.4.1 Apprentices

1 b) Percentage

		1964			1969		
		Total	Length of Course		Total	Length of Course	
			2 - 3	3 1/2 and more		2 - 3	3 1/2 and more
			years			years	
Chambers of Industry and Commerce	M	100	64,9	35,1	100	64,1	35,9
	F	100	97,5	2,5	100	96,9	3,1
Chambers of Handicrafts	M	100	64,5	35,5	100	47,9	52,1
	F	100	97,3	2,7	100	96,4	3,6
Chambers of Agriculture	M	100	4,6	95,4	100	100	-
	F	100	2,3	97,7	100	100	-
Other	M	100	51,1	48,9	100	42,0	58,0
	F	100	100	-	100	100	-
Total	M	100	62,1	37,9	100	58,0	42,0
	F	100	95,0	5,0	100	97,2	2,8

cont. Vocational Education and Training

B.6.6.4 Apprentices and Trainees by Length of Training Course

B.6.6.4.2 Trainees

a) Number

		1964			1969		
		Total	Length of Course		Total	Length of Course	
			1 - 1 1/2	2		1 - 1 1/2	2
			years			years	
Chambers of Industry and Commerce	M	3.518	65	3.453	4.024	449	3.575
	F	32.234	7.948	24.286	31.679	10.117	21.562
Chambers of Handicrafts	M	104	-	104	54	-	54
	F	1.960	20	1.940	1.638	17	1.621
Chambers of Agriculture	M	-	-	-	-	-	-
	F	-	-	-	-	-	-
Other	M	-	-	-	-	-	-
	F	5.889	-	5.889	8.726	-	8.726
Total	M	3.622	65	3.557	4.078	449	3.629
	F	40.083	7.968	32.115	52.043	10.134	31.909

cont. Vocational Education and Training

B.6.6.4 Apprentices and Trainees by Length of Training Course

B.6.6.4.2 Trainees

b) Percentage

		1964			1969		
		Total	Length of Course		Total	Length of Course	
			1 - 1 1/2	2		1 - 1 1/2	2
			years			years	
Chambers of Industry and Commerce	M	100	1,9	98,1	100	11,2	88,8
	F	100	24,7	75,3	100	31,9	68,1
Chambers of Handicrafts	M	100	-	100	100	-	100
	F	100	1,0	99,0	100	1,0	99,0
Chambers of Agriculture	M	-	-	-	-	-	-
	F	-	-	-	-	-	-
Other	M	-	-	-	-	-	-
	F	100	-	100	100	-	100
Total	M	100	1,8	98,2	100	11,0	89,0
	F	100	19,9	80,1	100	24,1	75,9

cont. Vocational Education and Training

B.6.6.5 Personnel[1] in Training in Public Administration[2]

	1960		1969	
	Number	%		Number
Federal Government, total	6.080	100	100	8.891
thereof Public servants	4.167	68,5	55,8	4.964
Employees	1.341	22,1	23,4	2.078
Wage earners	572	9,4	20,8	1.849
Länder Governments, total	48.728	100	100	84.390
thereof Public servants	38.032	78,0	77,3	65.209
Employees	8.430	17,3	19,6	16.576
Wage earners	2.266	4,7	3,1	2.605
Communities[3]	22.411	100	100	39.914
thereof Public servants	5.375	24,0	24,2	9.647
Employees	14.860	66,3	79,2	28.039
Wage earners	2.176	9,7	5,6	2.228
Total Public Administration	77.219	100	100	133.195
thereof Public servants	47.574	61,6	59,9	79.820
Employees	24.631	31,9	35,1	46.693
Wage earners	5.014	6,5	5,0	6.682

1) Full-time personnel only.
2) Not including Federal Railway and Postal Administration.
3) Not including communities with less than 1.000 inhabitants.

Source: Federal Statistical Office

B.7 Post-secondary Education

B.7.1 Total Enrolments by Type of Institution*)

Type of Institution	1959	1969	Increase Decrease 1959 - 1969
	Number		
Ingenieurschule	39.372	76.398	+ 94,0 %
Kunsthochschule, Sporthochschule	7.675	10.075	+ 31,3 %
Pädagogische Hochschule	26.103	68.879	+ 163,9 %
University	191.495	307.416	+ 60,5 %
Total	264.645	462.768	+ 74,9 %
	Percentage		
Ingenieurschule	14,9	16,5	+ 1,6
Kunsthochschule, Sporthochschule	2,9	2,2	- 0,7
Pädagogische Hochschule	9,9	14,9	+ 5,0
University	72,3	66,4	- 5,9
Total	100	100	

*) Not including Höhere Fachschule other than Ingenieurschule.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.2 New Entrants

Type of Institution	1959		1969		Increase Decrease 1959 - 1969
	Number				
Ingenieurschule	16.866		32.291		+ 91,5 %
Kunsthochschule, Sporthochschule	2.313		2.943		+ 27,2 %
Pädagogische Hochschule	10.431		15.996		+ 53,4 %
University	44.677		68.001		+ 52,2 %
Total	74.287		119.231		+ 60,5 %
	Percentage				
	*			*	*
Ingenieurschule	42,8	22,7	27,1	42,0	- 0,8
Kunsthochschule, Sporthochschule	30,1	3,1	2,5	29,2	- 0,9
Pädagogische Hochschule	40,0	14,0	13,4	23,2	- 16,8
University	23,3	60,	57,0	22,1	- 1,2
Total	28,1	100	100	25,7	- 2,4

* Percentage of total enrolments.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.3 German New Entrants by Educational Background*)

Field of Study	Total New Entrants	Gymnasium						Höhere Fach-schule	Other
		Total	thereof						
			classical	modern languages	mathe-matics-natural sciences	other types	Abend-gymnasium, Kolleg		
Humanities	11.703	21,0	25,2	28,0	13,5	10,3	23,1	8,5	7,2
Social sciences and law	9.003	16,1	20,5	15,4	14,9	15,1	23,4	4,0	7,1
Medical sciences	2.933	5,3	8,4	5,7	5,2	1,2	8,0	-	1,4
Natural sciences	10.961	19,8	21,8	16,5	29,9	8,7	21,3	6,4	4,9
Technology	6.334	10,7	10,8	8,4	18,2	3,9	9,0	44,9	2,8
Agriculture and related	989	1,7	1,6	1,4	2,0	1,8	1,2	3,8	1,7
Other fields	46	0,0	0,0	0,0	0,1	0,0	0,1	0,2	0,2
Total university	41.969	74,6	88,3	75,4	83,8	41,0	86,1	67,8	25,3
Pädagogische Hochschule	15.068	24,2	10,5	23,3	15,1	57,9	13,3	29,2	59,2
Kunsthochschule, Sporthochschule	1.090	1,2	1,2	1,3	1,1	1,1	0,6	3,0	15,5
Grand Total	58.127	100	100	100	100	100	100	100	100

*) Not including new entrants into Höhere Fachschule.

Source: Federal Statistical Office

cont. B.7.3 German University New Entrants by Educational Background*)

Field of Study	Total New Entrants	Gymnasium						Höhere Fach-schule	Other
		Total	thereof						
			classical	modern languages	mathe-matics-natural sciences	Abend-gymnasium, Kolleg	other types		
Humanities	100	97,7	15,1	55,5	17,0	7,0	3,1	0,7	1,6
Social sciences and law	100	97,5	16,0	39,8	24,2	13,4	4,1	0,4	2,1
Medical sciences	100	98,7	20,1	44,8	26,3	3,3	4,2	-	1,3
Natural sciences	100	98,2	13,9	34,9	40,0	6,4	3,0	0,6	1,2
Technology	100	91,9	12,0	30,7	42,1	4,9	2,2	6,9	1,2
Agriculture and related	100	91,6	11,2	34,0	30,2	14,4	1,8	3,7	4,7
Other fields	100	.	.	.	.	.	.	.	.
Total university	100	96,8	14,3	41,7	29,3	7,8	3,2	1,6	1,6
Pädagogische Hochschule	100	87,6	4,9	35,8	14,8	30,7	1,4	1,9	10,5
Kunsthochschule, Sporthochschule	100	59,1	7,6	28,1	14,1	8,4	0,9	2,7	38,2
Grand Total	100	93,7	12,1	39,9	25,2	13,8	2,7	1,7	4,6

*) Not including new entrants into Höhere Fachschule.

cont. Post-secondary Education

B.7.4 Foreign Students

B.7.4.1 Total Enrolments

Type of Institution	1959		1969		Increase Decrease 1959 - 1969
Number					
Ingenieurschule	871		3.870		+ 344,3 %
Kunsthochschule, Sporthochschule	784		1.350		+ 72,2 %
Pädagogische Hochschule	39		232		+ 494,9 %
University	18.321		21.981		+ 20,0 %
Total	20.015		27.433		+ 37,1 %
Percentage					
	*			*	*
Ingenieurschule	2,2	4,4	14,1	5,0	+ 2,8
Kunsthochschule, Sporthochschule	10,2	3,9	4,9	13,4	+ 3,2
Pädagogische Hochschule	0,1	0,2	0,8	0,3	+ 0,2
University	9,6	91,5	80,1	7,2	- 2,4
Total	7,6	100	100	5,9	- 1,7

* Percentage of total enrolments.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.4 Foreign Students

B.7.4.2 New Entrants

Type of Institution	1959		1969		Increase Decrease 1959 - 1969
	Number				
Ingenieurschule	439		1.562		+ 255,8 %
Kunsthochschule, Sporthochschule	330		452		+ 37,0 %
Pädagogische Hochschule	39		50		
University	4.601		3.753		- 18,4 %
Total	5.409		5.817		+ 7.5 %
	Percentage				
	*			*	*
Ingenieurschule	50,4	8,1	26,9	40,4	- 10,0
Kunsthochschule, Sporthochschule	42,1	6,1	7,8	33,5	- 8,6
Pädagogische Hochschule	100	0,7	0,9	21,6	
University	25,1	85,1	64,4	17,1	- 8,0
Total	27,0	100	100	21,2	- 5,8

* Percentage of foreign students total enrolments.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.5 German Female Students

Type of Institution	1959		1969		Increase Decrease 1959 - 1969
Number					
Ingenieurschule	.		.		.
Kunsthochschule, Sporthochschule	886		1.006		+ 13,5 %
Pädagogische Hochschule	6.911		11.398		+ 64,9 %
University	10.560		15.091		+ 42,9 %
Total					
Percentage					
	*			*	*
Ingenieurschule	.	.	.	.	.
Kunsthochschule, Sporthochschule	44,7	.	.	40,4	- 4,3
Pädagogische Hochschule	66,5	.	.	71,5	+ 5,0
University	26,3	.	.	23,5	- 2,8
Total	.	100	100	.	.

* Percentage of German students total enrolments.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.6 University Enrolments by Field of Study

B.7.6.1 Total Enrolments*)

	1959	1969	Increase Decrease 1959 - 1969
	Number		
Humanities	46.489	82.643	+ 77,8 %
Social sciences and law	45.358	76.747	+ 69,2 %
thereof law	20.375	34.164	+ 67,7 %
Medical sciences	31.630	45.284	+ 43,2 %
thereof pharmacy	4.206	5.205	+ 23,8 %
veterinary medicine	1.570	2.529	+ 61,1 %
Natural sciences	28.582	59.834	+109,3 %
Technology	36.952	38.139	+ 3,2 %
thereof architecture	4.758	5.124	+ 7,7 %
Agriculture and related	2.484	4.769	+ 92,0 %
thereof home economics	.	839	.
Total	191.495	307.416	+ 60,5 %
	Percentage		
Humanities	24,3	26,9	+ 2,6
Social sciences and law	23,7	25,0	+ 1,3
thereof law	10,6	11,1	+ 0,5
Medical sciences	16,5	14,7	- 1,8
thereof pharmacy	2,2	1,7	- 0,5
veterinary medicine	0,8	0,8	-
Natural sciences	14,9	19,4	+ 4,5
Technology	19,3	12,4	- 6,9
thereof architecture	2,5	1,7	- 0,8
Agriculture and related	1,3	1,6	+ 0,3
thereof home economics	.	0,3	.
Total	100	100	-

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*) German and foreign students. Not including students on leave (1970 = 12.389) and auditors (1970 = 6.042).

cont. Post-secondary Education

B.7.6 University Enrolments by Field of Study

B.7.6.2 Dissemination by Sex

	1959		1969	
	Percentage			
	Male	Female	Female	Male
Humanities	19,0	45,3	51,4	19,8
Social sciences and law	25,8	15,1	13,3	28,3
Medical sciences	13,8	27,5	16,7	14,2
Natural sciences	16,2	9,8	15,6	20,6
Technology	23,7	1,9	1,4	15,6
Agriculture and related	1,5	0,4	1,6	1,5
Total	100	100	100	100

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.7 Study Careers by Sex, Denomination and Social Background, North Rhine-Westphalia 1958 - 1966

B.7.7.1 New Entrants 1958 (Basic Group)

Characteristics (Responses to Question)[1]		Percentage of Responses	
1. Sex (6.984)	male	77,4	
	female	22,6	
2. Personal Status (6.915)	married	4,7	
		Students	Total Population
3. Denomination (6.884)	Catholic	51,7	52,1
	Protestant	46,9	43,5
	other	1,4	4,4
4. Social background (6.256)	status and vocation of father:		
	university graduate	35,8	
	other educational background	64,2	(100)
	of which:		
	employee below managerial level	18,0	(28,0)
	liberal profession	13,4	(20,9)
	public servant	13,0	(20,3)
	wage earner[3]	10,9	(17,0)
	manager	5,7	(8,9)
	farmer	3,2	(4,9)

cont. B.7.7.1 New Entrants 1958 (Basic Group)

Characteristics (Responses to Question)		Percentage of Responses	
5. Regional background (6.948)	students with domicile community in		
	North Rhine-Westphalia	80,3	
	adjoining Länder	12,2	
	size class of domicile community (inhabitants)		
		Students	Total Population[2]
	under 3.000	8,8	10,5
	3.000 - 10.000	11,1	13,5
	10.000 - 50.000	22,0	23,3
	50.000 and more	58,1	52,7

1) Total group = 6.984 German students.

2) Population Census 1961.

3) Including master craftsman.

Source: Josef Hitpass, Das Studienschicksal des Immatrikulationsjahrgangs 1958, Gütersloh 1967 (percentage adapted: R = 100)

cont. Post-secondary Education

B.7.7.2 Status of Study Careers 1966

Characteristics (Responses to Question)		Percentage of Responses	
New Entrants of 1958 in 1966 (6.458)	graduates	78,2	
	drop-outs	12,9	
	still studying	8,9	
Drop-out/success rates by		success	Drop-out
1. Sex	male	92	8
	female	83	17
2. Denomination	Catholic	69	11
	Protestant	87	13
3. Social Background	Status and vocation of father:		
	university graduate	90	10
	liberal profession	90	10
	employee below managerial level	90	10
	public servant	90	10
	master craftsman	88	12
	manager	87	13
	wage earner	85	15
Reasons for drop-out as reported by students themselves (758)			
		Male (494)	Female (264)
	marriage	0,8	71,2
	intellectual incapacity	29,6	9,1
	financial reasons	20,4	3,4
	situation of family	16,0	9,1
	dissatisfaction with university	10,3	3,0
	better chances	10,1	0,8
	......	....	....

Source: Josef Hitpass, Das Studienschicksal des Immatrikulationsjahrgangs 1958, Gütersloh 1967 (percentage adapted: R = 100)

cont. Post-secondary Education

B.7.8 University Examinations*) and Failure Rates of German Students

Field of Study (selected)	1962		1968[1]	
	Number	% Failure		Number
German Students examined, total[2]	25.202	14,9	13,2	34.151
thereof				
Teacher students Gymnasium	4.591	21,7	13,7	6.513
Technology	4.505	12,1	12,7	5.256
Medicine	4.422	4,5	2,1	6.670
Law	4.295	21,1	14,6	3.854
Economics	3.590	23,1	29,5	6.648
Theology	1.080	4,9	3,9	1.059
Chemistry	816	4,4	2,7	822
Physics	624	4,0	4,1	1.238
further				
Teacher students Grundschule and Hauptschule[3]	432	4,8	15,4	4.037

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*) Staats- and Diplomprüfungen. Not including doctorates.

1) Not including Schleswig-Holstein.
2) Not including teacher students: Grundschule and Hauptschule.
3) In university courses.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.9 Length of University Studies

Field of Study (selected)	Minimum Number of Semesters[1]	Year of Successful Termination of Studies			
		1962		1967[2]	
		Male	Female	Female	Male
		Number			
German students graduated, total[3]		14.416	2.788	3.320	15.635
thereof Teacher students					
Gymnasium	8	2.010	886	955	2.002
Technology	8	3.890	53	92	3.734
Medicine	11	1.371	809	1.082	2.318
Law	8	2.331	255	185	1.879
Economis	8	2.091	368	372	2.600
Theology	8	863	35	68	743
Natural sciences	8	1.310	53	120	1.836
further Teachers of Grundschule and Hauptschule	6	134	260	897	671
		Percentage Minimum			
German students graduated, total[3]		25,7	37,5	16,5	13,3
thereof Teacher students					
Gymnasium		6,1	7,4	6,1	3,1
Technology		7,5	0,0	2,2	3,8
Medicine		74,8	74,2	31,4	38,4
Law		44,9	56,5	15,7	21,0
Economics		27,4	17,1	4,6	12,0
Theology		24,8	2,9	5,9	10,0
Natural sciences		2,3	7,5	5,0	3,1
further Teachers of Grundschule and Hauptschule		65,7	39,6	58,4	51,4

[1] According to examination rules.

[2] Not including Schleswig-Holstein and North Rhine-Westphalia.

[3] Not including Teachers of Grundschule and Hauptschule.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.10 Study Grants for Students*)

	1965	1970	Increase Decrease 1965 - 1970 - % -
	1.000 DM		
Ingenieurschule	25.119	68.832	+ 174,0
Höhere Wirtschaftsfachschule	2.034	7.154	+ 251,7
Other Höhere Fachschule	3.199	14.446	+ 351,6
Kunsthochschule /Musikhochschule/ Sporthochschule	3.534	6.413	+ 81,5
Pädagogische Hochschule	25.427	78.171	+ 207,4
Universität1)	137.431	272.262	+ 98,1
Total	196.744	447.278	+ 127,3
	Enrolments1)		
Total post-secondary	354.518	430.766	+ 21,5
	DM per student		
Total post-secondary	555,-	1.038,-	+ 87,0

*) Not including study grants for foreign students (1970 =8,1 Mill. DM).

[1] Average summer/winter-semester beginning1965 or 1970 respectively. Granted by Federal and Länder governments.

Source: Ministries of Education and Culture and Federal government budget

cont. Post-secondary Education

B.7.11 University Teaching Staff

	1960	1968
Students	203.404	287.438
Staff posts, total	14.381	34.643
thereof chairs	3.098	4.988
other senior staff	2.058	8.755
assistant professors	9.225	20.900
Students per post of total staff	14	8
" " chair	66	58
" " other senior staff	99	33
" " assistant professor	22	14
Other senior staff per chair	0,7	1,8
Assistant professors per chair	3	4,2

Source: Ministries of Education and Culture

cont. Post-secondary Education

B.7.12 University Senior Teaching Staff - Vacancies[*)]

	1964	1968
Chairs		
number	780	551
% of total	18,6	11,9
Other senior staff		
number	1.329	1.059
% of total	25,4	13,3
Assistant professors		
number	.	1.456
% of total	.	7,7

*) Not including universities being established 1964 or later.

Source: Ministries of Education and Culture

cont. Post-secondary Education

B.7.13 Expenditure

B.7.13.1 Total Expenditure by Type of Institution*)

	1963	1968	Increase Decrease 1963 - 1968
	1.000 DM		
Ingenieurschule	213.013	374.601	+ 75,9 %
Kunsthochschule, Musikhochschule, Sporthochschule	64.334	79.028	+ 22,8 %
Pädagogische Hochschule	129.643	245.907	+ 89,7 %
University 1)	2.024.255	3.863.293	+ 90,9 %
Total	2.431.245	4.562.829	+ 87,7 %
	Percentage		
Ingenieurschule	8,8	8,2	- 0,6
Kunsthochschule, Musikhochschule, Sporthochschule	2,6	1,7	- 0,9
Pädagogische Hochschule	5,3	5,4	+ 0,1
University 1)	83,3	84,7	+ 1,4
Total	100	100	-

*) Not including Höhere Fachschule other than Ingenieurschule.

1) Including university clinics.

Source: Federal Statistical Office

B.7.13.2 Total Expenditure in DM per Student

	1963	1968	Increase Decrease 1963 - 1968
	DM		
Ingenieurschule	3.872,--	5.920,--	+ 52,9 %
Kunsthochschule, Musikhochschule, Sporthochschule	7.154,--	8.336,--	+ 16,5 %
Pädagogische Hochschule	2.948,--	3.844,--	+ 30,4 %
University 1)	8.044,--	13.349,--	+ 65,9 %
	University = 100		
Ingenieurschule	48,1	44,3	- 3,8
Kunsthochschule, Musikhochschule, Sporthochschule	88,9	62,4	- 26,5
Pädagogische Hochschule	36,6	28,8	- 7,8
niversity 1)	100	100	-

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1) Including university clinics.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.14 Post-graduate Training of Gymnasium Teachers

B.7.14.1 Teacher-Trainees*)

Field of Study	1959	1969	Increase Decrease 1959 - 1969
	Number		
Humanities	2.698	5.796	+ 114,8 %
Natural sciences	933	1.902	+ 103,9 %
Other scientific subjects	112	101	- 9,8 %
Other subjects	469	596	+ 27,1 %
Total	4.212	8.395	+ 99,3 %
thereof female	1.439	2.862	+ 98,9 %
	Percentage		
Humanities	64,0	69,0	+ 5,0
Natural sciences	22,2	22,7	+ 0,5
Other scientific subjects	2,7	1,2	- 1,5
Other subjects	11,1	7,1	- 4,0
Total	100	100	-
thereof female	34,2	34,1	- 0,1

*) Studienreferendare.

Source: Federal Statistical Office

cont. Post-secondary Education

B.7.14.2 Teacher Examinations*)

Field of Study	1959	1968	Increase Decrease 1959 - 1968
	Number		
Humanities	1.163	3.305	+ 184,2 %
Natural sciences	479	1.217	+ 154,1 %
Other scientifics subjects	39	65	+ 66,7 %
Other subjects	252	339	+ 34,5 %
Total	1.933	4.926	+ 154,8 %
thereof female	637	1.572	+ 146,8 %
	Percentage		
Humanities	60,2	67,1	+ 6,9
Natural sciences	24,8	24,7	- 0,1
Other scientifics subjects	2,0	1,3	- 0,7
Other subjects	13,0	6,9	- 6,1
Total	100,0	100,0	-
thereof female	33,0	31,9	- 1,1

*) Pädagogische Prüfungen.

Source: Federal Statistical Office

B.8 Adult Education

B.8.1 Some Basic Data on Organisational Structure and Enrolment of Adult Education Centres

	1959	1969 1)
Volkshochschulen (centres), total	1.089	1.144
thereof community owned	41,1 %	51,3 %
Centres with full-time directors	14,2 %	18,9 %
Branches (Außenstellen)	4.606 (1963)	4.510
Courses	63.769	102.773
Enrolments in courses 2)	1.680.865	2.080.020
Branches per centre	4 (1963)	4
Courses per centre	59	94
Enrolments per centre	1.543	1.905
Enrolments per course	26	20

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1) Response from 95 % of all centres. Centres and branches = 100 %

2) Not including enrolments in lecture cycles (1969 = 997.600) and participants in individual activities (1969 = 3.523.900).

Source: Deutscher Volkshochschul-Verband

cont. Adult Education

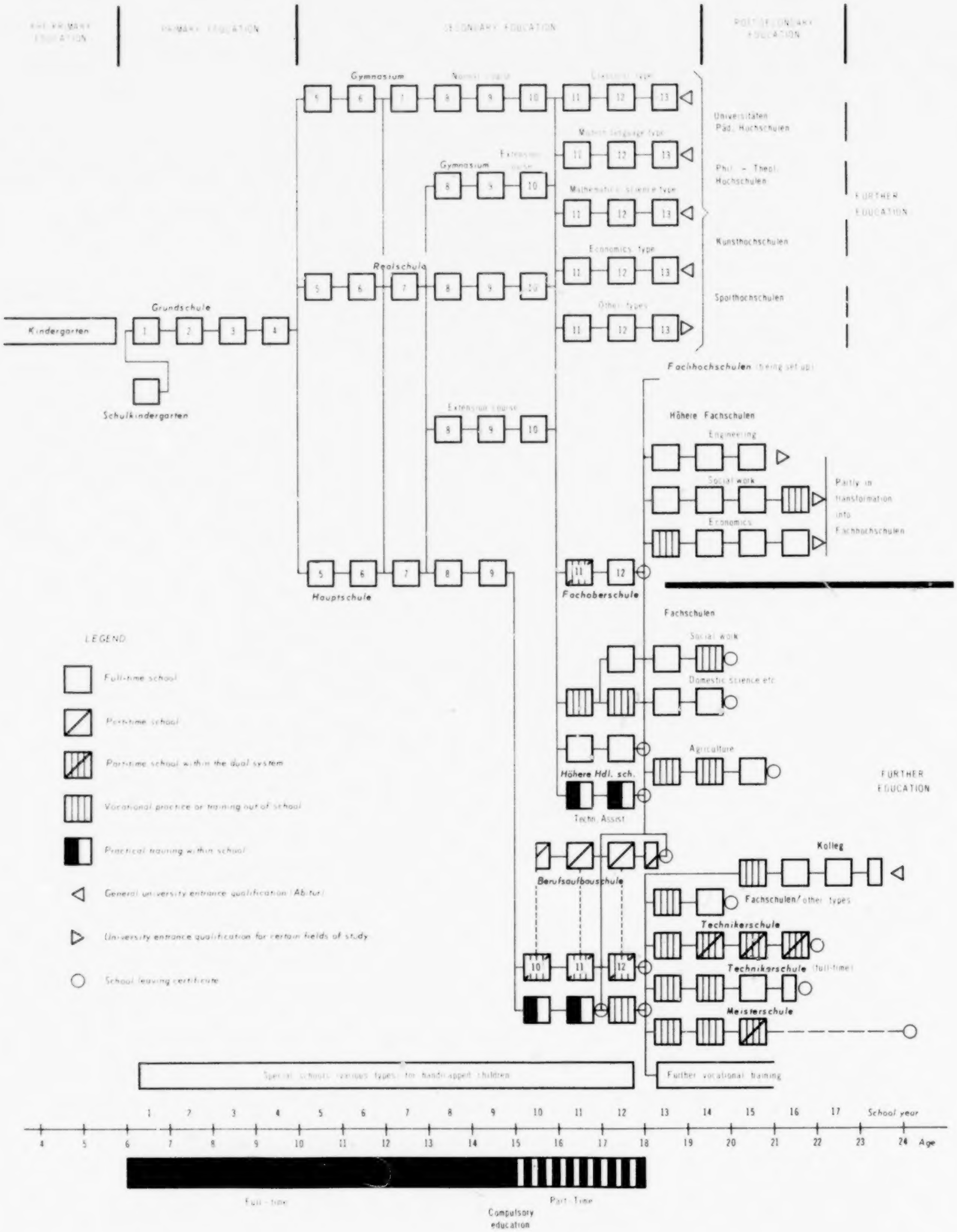
B.8.2 The Financing of Adult Education Centres

	1963 1)	1969 2)
	1.000 DM	
Subsidies	31.239	56.286
Revenue	14.344	31.381
Total	45.583	87.667
	Percentage	
Subsidies	68,5	64,2
thereof Community	57,3	56,6
Land	27,4	27,1
district	9,3	10,8
other	6,0	5,5
Revenue	31,5	35,8
thereof fees	89,8	86,4
DM subsidies per centre	31.810,-	51.540,-
DM fee per course	202,-	264,-
DM fee per enrolment	8,-	13,-

1) Response from 86 % of all centres.
2) Response from 95 % of all centres.

Source: Deutscher Volkshochschul-Verband

THE STRUCTURE OF THE EDUCATIONAL SYSTEM
IN THE FEDERAL REPUBLIC OF GERMANY, 1970


PRE-PRIMARY EDUCATION
PRIMARY EDUCATION
SECONDARY EDUCATION
POST-SECONDARY EDUCATION
FURTHER EDUCATION
Gymnasium
Normal course
Classical type
Modern language type
Gymnasium
Extension course
Mathematics science type
Economics type
Other types
Universitäten
Päd. Hochschulen
Phil. – Theol. Hochschulen
Kunsthochschulen
Sporthochschulen
Realschule
Grundschule
Kindergarten
Schulkindergarten
Extension course
Fachhochschulen (being set up)
Höhere Fachschulen
Engineering
Social work
Economics
Partly in transformation into Fachhochschulen
Hauptschule
Fachoberschule
Fachschulen
Social work
Domestic science etc
Agriculture
Höhere Hdl. sch.
Techn. Assist.
FURTHER EDUCATION
Berufsaufbauschule
Kolleg
Fachschulen/other types
Technikerschule
Technikerschule (full-time)
Meisterschule
LEGEND
Full-time school
Part-time school
Part-time school within the dual system
Vocational practice or training out of school
Practical training within school
General university entrance qualification (Abitur)
University entrance qualification for certain fields of study
School leaving certificate
Special schools (various types) for handicapped children
Further vocational training
School year
Age
Full-time
Part-Time
Compulsory education

GLOSSARY OF THE MAIN TERMS(1)
USED IN THE GERMAN REPORT ON EDUCATION(2)

Kindergarten:	pre-primary school
Schulkindergarten:	pre-primary classes for children of school age who are physically and mentally retarded
Grundschule:	primary school [Volkschule: term used when Grundschule and Hauptschule are linked together (see under)]
Hauptschule:	main school (general secondary short courses)
Realschule:	intermediate school (general secondary short courses)
Abendrealschule:	intermediate school (general secondary short courses) - evening classes
Realschuleabschluss:	leaving certificate of the Realschule
Gymnasium:	general secondary school (long courses)
Abendgymnasium:	general secondary school (long courses) evening classes
Kolleg:	institute of general education preparing young adults for higher education
Reifeprüfung or Abitur:	leaving certificate of the gymnasium giving access to all branches of higher education (Allgemeine Hoschulreife) either to certain branches of higher education (Fachgebundene Hochschulreife)
Fachoberschule:	technical secondary studies
Berufsschule:	part-time vocational school
Berufsaufbauschule:	vocational extension school
Berufsfachschule:	full-time vocational school
Fachschule:	specialised technical secondary school

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1) Quoted from the Conversion Key (classification of education) - Germany - prepared by the O.E.C.D. Secretariat.

2) See "The structure of the educational system in the Federal Republic of Germany, 1970" for the structure and the length of the studies.

Höhere Fachschule:	advanced technical school (of which ... Wirtschaft ... economics studies ...)
Fachhoschule:	higher technical college
Ingenieurschule:	school for engineers
Pädagogische Hochschule:	teacher training college
Universität Technische Hochschule und entsprechende Hochschule:	university, technical university and equivalent
Philosophisch-Theologische und Kirchliche Hochschule:	institute of philosophy and theology
Kunst-Musik und Sport-Hochschule:	institute of higher education for fine arts, music and sports.

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